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ABSTRACT

One of the projects selected for the University Urban Interface Program at the University of Pittsburgh was that of studying the impact of the university on the city of Pittsburgh. In pursuing this goal, studies were made of university-related local business volume; value of local business property committed to university-related business; credit expansion from university-related deposits; unrealized local business because of university activities; jobs attributable to the presence of the university; personal income from university-related business; goods and services procured with university-generated income; revenues received by local governments; public services required by university people; government properties allocatable to university-related services; real estate taxes foregone because of the tax exempt status of the university; the value of the municipal services provided by the university; and the ultimate socio-economic effect of the university on the city. The results of these studies are presented in this document. (HS)

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THE IMPACT OF THE UNIVERSITY OF PITTSBURGH ON THE LOCAL ECONOMY

An implementation study based on
John Caffrey and Herbert H. Isaacs,
Estimating the Impact of a College
or University on the Local Economy
(American Council on Education, 1971)

Prepared for the
University-Urban Interface Program
University of Pittsburgh
Pittsburgh, Pennsylvania 15213

by

Educational Systems Research Group
Washington, D.C.

April, 1972

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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U.S.O.E. Contract No. OEG-29-480725-1027 Project No. 80725

FOREWORD

As a member of the Commission on Administrative Affairs of the American Council on Education just prior to the publication of the Caffrey-Isaacs report by the Council, I was an enthusiastic supporter of the project. Although I recognized the general usefulness and importance of the problems attacked by the study, I had a personal and professional interest in the estimation of economic impact on university communities.

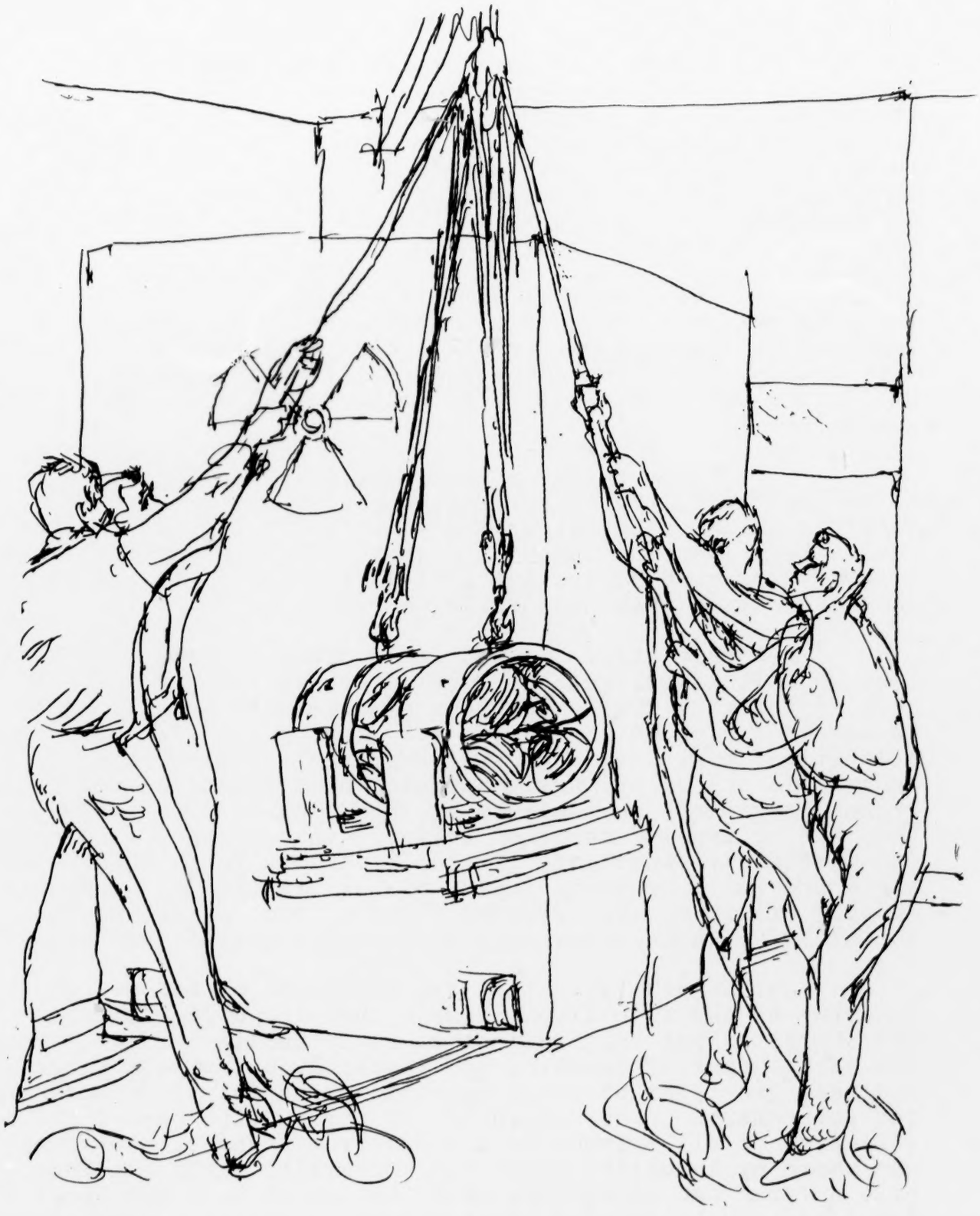
As the principal administrative officer of a major university, and in a community which has been keenly aware of the rapid growth of this major university over the past decade, I have often wished that I could cite with confidence and objectivity the findings that such studies would reveal.

It is therefore a great source of satisfaction to me to see the University of Pittsburgh among the first American colleges or universities to launch a field test of the Caffrey-Isaacs volume. I wish to reaffirm the gratitude already expressed by the authors of this report to all those who have helped them prepare it.

A very brief comment is in order about the methodology of this investigation. Obviously, we are not dealing here in terms of rigid models or precise data such as employed in advanced econometric analyses. Many of the data here are statistical approximations and the facts described are general in scope, primarily because the elements of university economics are not amenable to the kinds of precise analysis that can be applied to other units of the economy. The study is nonetheless important, for too little is known about even the approximate economic impact of universities on communities, and any effort to shed greater light on the subject has a social value which transcends the limitations of such analysis.

I am gratified that the substance of the report confirms my own intuitive judgment that the University of Pittsburgh is not only an instrument of public service through its vast output of teaching and research, but also a direct and indirect generator of large economic gains for the people and the governments in our vicinity. I commend the report to the attention of all friends of the University and all citizens who share my intention that this University shall continue to make a vital and increasing contribution to both the short-term and long-term benefit of the surrounding region. Constructive discussion of the University's role can be substantially advanced by this study.

Wesley W. Posvar
Chancellor



Installation Of Strong Focusing Magnet

PREFACE

The authors of this report record their warm appreciation of the assistance of many people within and outside the University of Pittsburgh. From public officials, businessmen, and university administrators and faculty, the response was truly remarkable. We thank all concerned.

This study was undertaken through the U.S. Office of Education, University of Pittsburgh Urban Interface Program, Albert C. Van Dusen, Secretary of the University and Principal Investigator, Robert C. Brictson, Director of Research Programs.

An internal advisory committee helped define sources and solve problems: Lou Tronzo (major liaison), Robert C. Brictson (Chairman), Joseph Colangelo (News and Publications), Dennis Concilla (Student Government), Eli Egert (Health Professions), Professor Joseph A. James (Urban Affairs), Hilda Jones, Diane Palmer and Marilyn Brown (Institutional Research), Allen Kent (Information Sciences), Helen Knox (Chancellor's Office), Dan McFadden (Student Affairs), Professor Jiri Nehnevajsa (Sociology), Professor Raymond L. Richman (Public and International Affairs), Professor Edward Sussna (Graduate School of Business). Among University staff providing special assistance on project tasks were James A. Beck, Theodore Bowman, John Vrana, Ron Cowell, Neale Grunstra, Ted Corbett, and Ed Maushart.

Members of the community also kindly agreed to help supply information: Tim Bailey (Oakland Chamber of Commerce and Western Pennsylvania National Bank), Joe Cossetti (City of Pittsburgh Treasurer), Edgar Michaels (Member of Pittsburgh City Council), Robert Pease (Allegheny Conference on Community Development), Leonard Staisey (County Commissioner), Henry Stewart (Economic Development Specialist, City Planning Commission), Howard Stewart (Western Pennsylvania Economy League).

None of these people who helped us should be held responsible for errors of fact and interpretation in our work. Nor were we able to follow all the suggestions for changes made by our advisors. Our interpretations and conclusions do not necessarily reflect the views of the U.S. Office of Education, the Buhl Foundation, or the University of Pittsburgh.

John Caffrey, Project Director
George Mowbray, Principal Investigator

From The Wings In Stephen Foster Memorial

THE ARTIST

Our report is enhanced in innumerable ways by the drawings of Henry Koerner, distinguished illustrator and Pittsburgh artist. During April, 1962, on commission from the University, Koerner roamed the campus. With pen and sketchpad, he put down his impressions of the University. The collection originally appeared in University of Pittsburgh in Drawings, published by the University in 1962.

A selection of the Koerner drawings has been included in this report. They are not here by accident or frivolous desire for embellishment. Quite the contrary. The art has a message: a university is much more than a business, even though we have studied one as a business.

The Koerner sketches are works of great power and veracity. They go, in pen and paper, beyond photos and prose in conveying the essentially human aspects of the university world. The pen has given us a still-life moving picture. A great university depends for its future on the dreams and realizations of students and faculty. In their study, research, interaction, and play, the spirit of the university is revealed through people.

The artist is a noted member of the Pittsburgh community, with honors that span many fields of artistic expression. Born in Vienna, Henry Koerner taught at the California College of Arts and Crafts, Munson Williams Proctor Institute, and Washington University. He has painted many notable people, and his work has often appeared in TIME Magazine. Mr. Koerner has been a well established artist and portraitist for forty years. His drawings and paintings are in a number of museums: Metropolitan Museum, the Museum of Modern Art, Art Institute of Chicago, Walker Art Center, the Whitney Museum, as well as in private collections.

Here, art appears as counterpoint to statistics.

Prescriptions At Central Pharmacy

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METHODOLOGICAL NOTE

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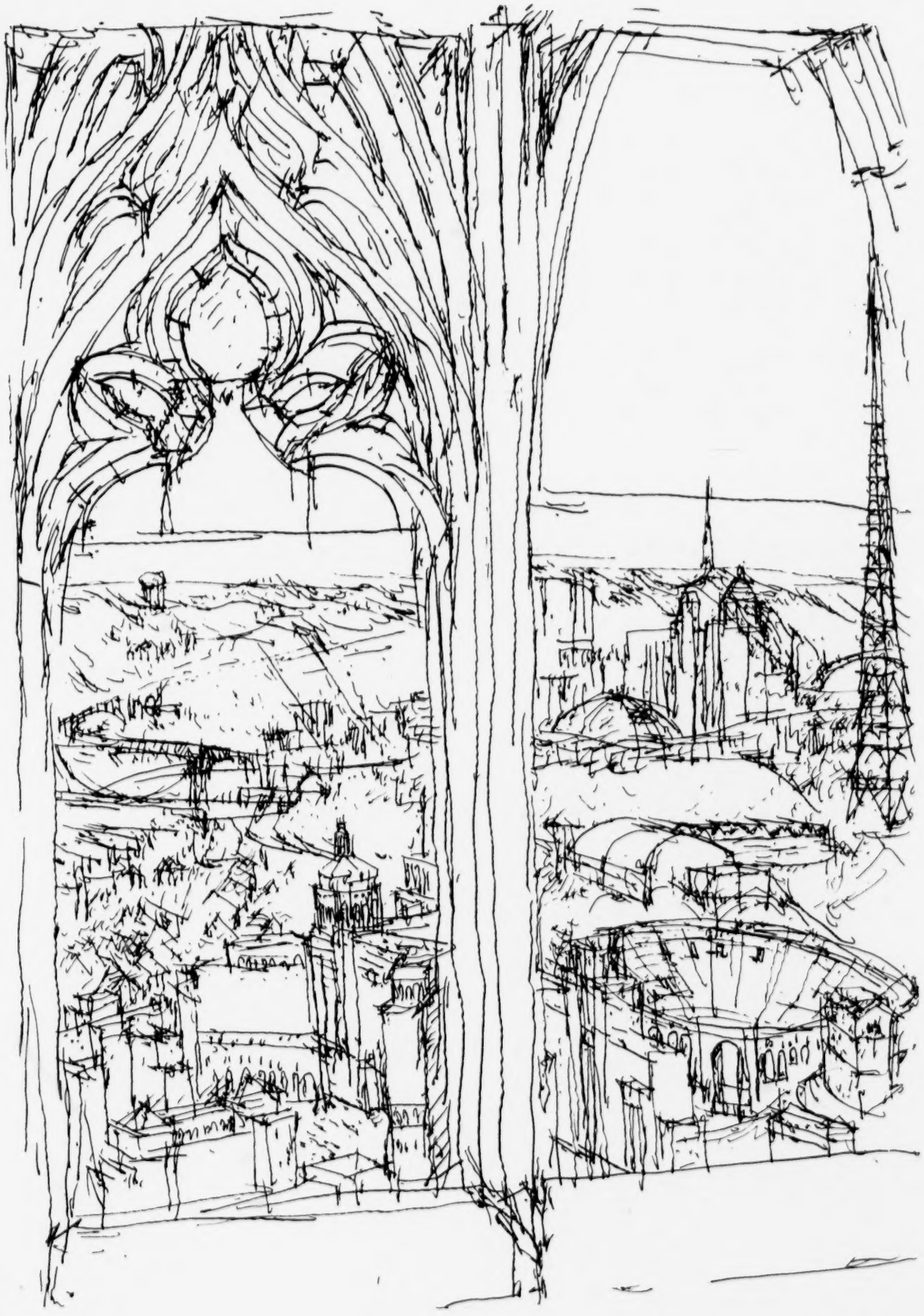

City Outlook From Cathedral Of Learning Window

I

WHAT IS THE UNIVERSITY AND WHY THIS STUDY?

A. WHAT IS THE UNIVERSITY OF PITTSBURGH?

The University of Pittsburgh is a non-sectarian, co-educational institution. Along with Pennsylvania State University and Temple University, it makes up the public university sector of the Pennsylvania System of Higher Education. Pitt is governed by a mixed public and private Board of Trustees. The bulk of the University's instructional and construction programs are state-funded; Pitt is a de facto state university. However, to a sizable degree, the University still relies on continuing private support for special graduate and professional programs, and for research and cultural efforts. Some schools of the University -- notably in the health professions -- receive particularly high levels of private funding.

1. Campuses in Pittsburgh and Four Other Places

The University's main campus is in Oakland, a district of Pittsburgh about three miles east of the Golden Triangle, the city's corporate and financial center. The main campus covers 125 acres. Pitt owns and operates 45 buildings, some new and others built or acquired since the Oakland campus began developing in 1908.

In other parts of the state, the University has four regional campuses -- small but growing manifestations of an urban university outside its urban home. The regional campuses are at Bradford, Greensburg, Johnstown and Titusville.

2. Pitt has 16,800 Full-time Students in Oakland

In the 1970-71 academic year, the reference year for this study, Pitt had 16,800 full-time students on its main campus, and a total of 19,600 when the regional campuses are included. Of the full-time students in this official enrollment figure, some 5,000 were graduate students. The main student body can be divided into three groups -- and has been so divided for the purposes of our study: 3,900 residence students living on campus, 7,800 in their own off-campus housing units, and 5,100 living at home and commuting back and forth to school. Pitt enrollment has grown rapidly during the past few years. It is expected to go on growing at a moderate rate for the rest of the decade.

The Oakland student body is increased each year by the addition of juniors transferring after their first two years at a regional campus. In addition, about 12,000 part-time students are enrolled in programs in the School of General Studies. Including these students, Pitt's total student body last year numbered 30,900, 92 per cent on the Oakland campus.

3. Faculty (2,500) and staff (3,000)

To deliver the educational and administrative services necessary for the University's programs, Pitt employs 5,500 people, 85 per cent (1,700 faculty and 3,000 staff) on its main campus in Oakland. The staff component of the system includes many different kinds of administrative support, ranging from clerical services for teaching personnel to senior administrators under the various Vice Chancellors.

4. Instruction and Research in 16 Schools

The University has the wide range of undergraduate and graduate instruction usually found in well developed institutions of its type:

Faculty of Arts and Sciences (FAS)
  The College of Arts and Sciences (Undergrad)(CAS)
  Graduate Programs in Arts and Sciences
Graduate School of Business (BUS)
General Studies (GEN)
Education (EDU)
Law (LAW)
Library and Information Sciences (LIS)
Public and International Affairs (PIA)
Social Work (SSW)
Medicine (MED)
Dental Medicine (DEN)
Nursing (NUR)
Pharmacy (PHA)
Health Related Professions (HRP)
Public Health (PBH)
Engineering (ENG)

The work of these schools is supported by libraries with 1.7 million volumes and a further 400,000 on microfilm. That's just on the Oakland campus. The regional campuses have their own library facilities.

5. Centers Carry Out Research Functions

Integrated with the work of the faculty in the 16 schools are 10 specialized centers:

Philosophy of Science Center
Space Research Co-ordination Center
Knowledge Availability Systems Center
Learning Research and Development Center
Computer Center
University Center for International Studies
Child Guidance Center
Film Library and Regional Instructional Materials Center
Management Research Center
Social Science Information Center

6. Pitt has More than 81,000 Living Alumni

The University has approximately 81,000 recorded living alumni, excluding some who have died without changes in records, and some living alumni whose addresses are not known to the Alumni Office. This figure excludes about 5,700 1971 grads, since it was compiled in the summer of that year before the most recent data were included (for example on the first graduating class of the School of Health Related Professions).

7. Three-term Calendar

Pitt operates on a three-term calendar of 15-week terms, each equal to a traditional semester. First term begins early in September, the second in January, and the third in April. A regular summer school session is held in addition to the third term.

8. Fees

Costs vary with the courses chosen, the student's living arrangements, place of residence, and length of registration period. For two terms: tuition and fees

For Pennsylvania residents	$850[1]
For non-residents	1,960
Room and board (typical)	1,100

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[1] For 1971-72, raised to $970.

9. Athletics

The intercollegiate athletic program includes 190 events involving more than 350 students annually. Programs cover varsity football, basketball, wrestling, soccer, swimming, track and field, cross-country, indoor track, gymnastics, baseball, tennis, and golf. More than 3,000 men and women participate in the intramural program.

10. Degrees Granted

In 1970-71: 5,688 in all --

Bachelors	2,967
1st Professionals	309
Masters	2,082
Doctorates	330

11. Governance

The Chancellor of the University of Pittsburgh is Dr. Wesley W. Posvar. The Board of Trustees has 36 members. Twelve are charter trustees, elected by the full board to serve until retirement. Twelve are Commonwealth trustees, with four each appointed by the Governor, the Speaker of the State House of Representatives, and the President Pro Tem of the State Senate to serve overlapping four-year terms. Six Alumni Trustees, serving overlapping three-year terms, are nominated by a vote of all the University's alumni of record. And six Term Trustees are elected by the full board to serve overlapping three-year terms. In addition to these 36, the Governor of the Commonwealth, the State Secretary of Education, and the Mayor of the City of Pittsburgh are ex officio Board members.

12. For Further Information

For further information on the University and its programs, plans and published documents, including this report and its technical supporting documents, please write to the Secretary of the University, University of Pittsburgh, Pittsburgh, Pennsylvania 15213.

B. WHY THIS STUDY?

The primary goal of this study is to explain in an objective fashion the direct cash-flow impact of the University of Pittsburgh on the surrounding economy -- in the city itself, in Allegheny County, in the Commonwealth of Pennsylvania, and beyond state borders. In pursuing

this goal, the research team conducting the study has applied, for test and evaluation purposes, the methodology suggested by the American Council of Education in a 1971 report by John Caffrey and Herbert H. Isaacs.[1]

The staff of the University-Urban Interface Program of the University of Pittsburgh, aware of the significance of an economic impact study, took the responsibility for asking the Educational Systems Research Group, Washington, to carry out the work on an independent basis. The study was supported in part by the U.S. Office of Education, Department of Health, Education and Welfare, and in part by the Buhl Foundation. It was also supported indirectly but importantly by all those members of the Pitt community who devoted time and interest to preparation of basic input data.

The business impact of institutions of higher education has been neglected in the literature on the value of education. This neglect is reflected in many ways, among them the traditional but now outmoded ideas about conflict between town and gown. The University and its surrounding community are increasingly viewed as interacting members of a vital social drama. The community and the University have many mutual interests.

Logan Wilson, President of the American Council on Education, in his foreword to Estimating the Impact of a College or University on the Local Economy, said that "the mutuality of interests is still not as widely understood and as fully appreciated as it ought to be". The original methodological research undertaken by Caffrey and Isaacs was underwritten by the ESSO Education Foundation. In trying to develop a more structured approach to the study of institutional impacts on local environments, the authors of the original study aimed at a balanced perspective. The positive effects of university expenditures and services are counterbalanced to a degree by the more obvious negative effects such as the implications of tax-exempt property and the value of social services provided to members of the university community by local government agencies.

One must be sensitive in these matters. This is not easy if the wrong ox is being gored. A University is a vast, complex entity. Its existence may mean blessings

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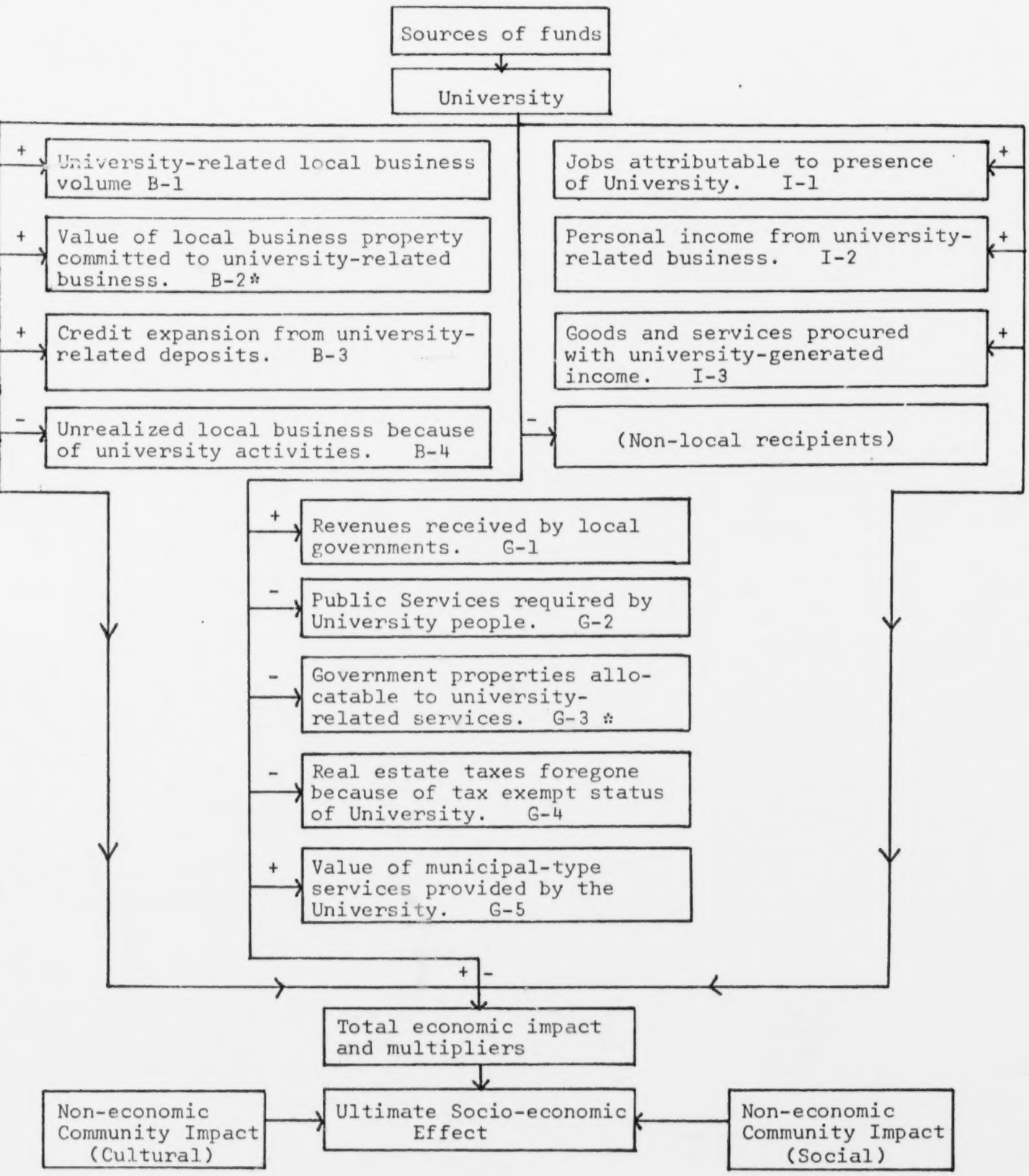
[1] John Caffrey and Herbert H. Isaacs, Estimating the Impact of a College or University on the Local Economy (Washington, American Council on Education, 1971), pp. 73, $3.00.

or curses to many people in its impact range. The net result of the impacts is a judgmental thing that goes far beyond the feeble confines of arithmetic. We are thus conscious of the sterility of narrow-minded approaches to impact analysis. A university is much more than a business that hires people, buys goods, and pays or does not pay the tax liabilities usually associated with businesses. It is a cultural element in the local social topography, inevitably affecting the vistas of people who come in contact with it. We are aiming, in this study, at the very limited objective of clarifying some of the University's observable or inferential economic effects in its local area. To do this, we focus our attention on the revenues and expenditures of the University of Pittsburgh in the year ended June 30, 1971. Where did they come from? What was done with the money the University received from students, governments, alumni, etc.?

It is not an apology but rather a claim to objectivity to say that this study is a first-pass attempt to freeze a complex scene that will not stand still to be examined. The effect of our observations is still to be sensed and felt in the endless competition for public and private resources. Some readers may lift statements out of context and use them to sharpen their debates. This is inevitable. The essentialities of political conflict and fiscal negotiation should, however, be aided by a dispassionate revelation of an outside judgment -- ours -- on the dollars and cents of institutional impact on the local scene.

IMPACT OF UNIVERSITY OF PITTSBURGH ON THE LOCAL ECONOMY


Sources of funds
University
+ University-related local business volume B-1
+ Value of local business property committed to university-related business. B-2*
+ Credit expansion from university-related deposits. B-3
- Unrealized local business because of university activities. B-4
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+ Revenues received by local governments. G-1
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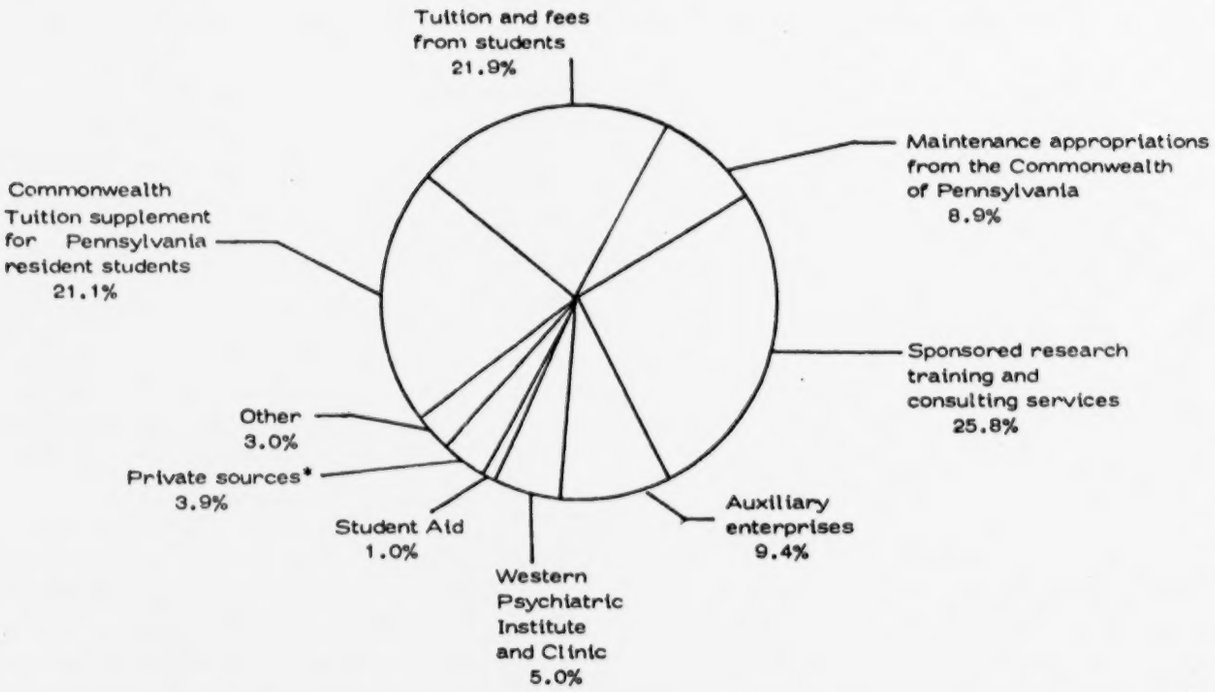
+ -
Total economic impact and multipliers
Non-economic Community Impact (Cultural)
Ultimate Socio-economic Effect
Non-economic Community Impact (Social)

* = model not used in this study

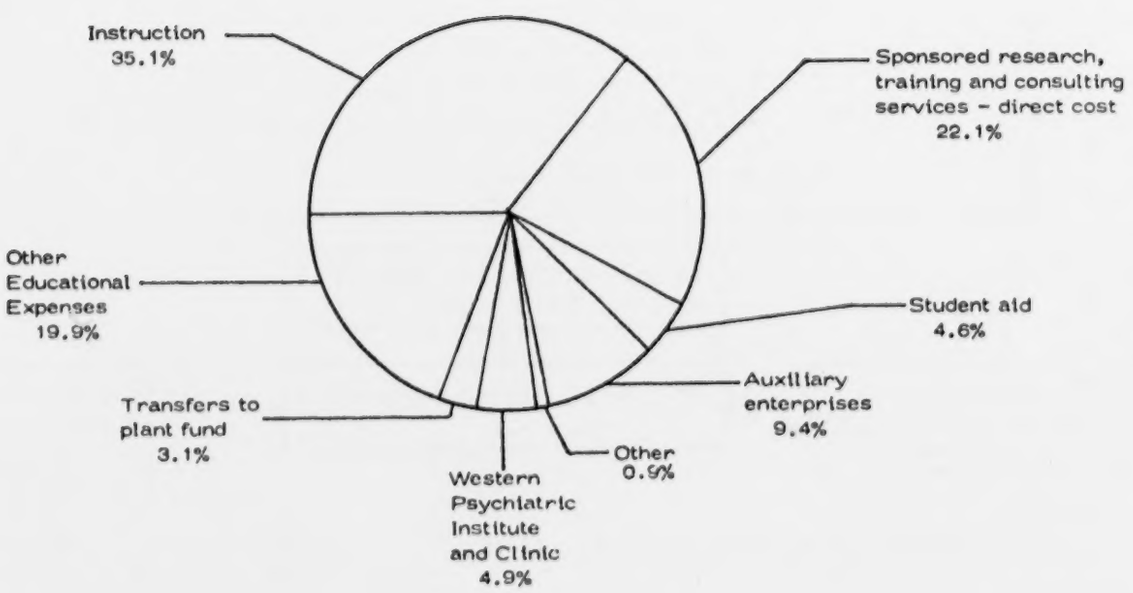
Chart by ESRG

SOURCES OF REVENUE 1970-71


Tuition and fees from students 21.9%
Maintenance appropriations from the Commonwealth of Pennsylvania 8.9%
Commonwealth Tuition supplement for Pennsylvania resident students 21.1%
Sponsored research training and consulting services 25.8%
Other 3.0%
Private sources* 3.9%
Student Aid 1.0%
Auxiliary enterprises 9.4%
Western Psychiatric Institute and Clinic 5.0%

* Amount represented is only that portion of funds from private sources that was applied as income. The greater portion of gifts, grants and endowment received each year is not represented here and is employed for capital improvement, special projects or endowment growth.

EXPENDITURES 1970-71


Instruction 35.1%
Sponsored research, training and consulting services - direct cost 22.1%
Other Educational Expenses 19.9%
Student aid 4.6%
Auxiliary enterprises 9.4%
Transfers to plant fund 3.1%
Other 0.9%
Western Psychiatric Institute and Clinic 4.9%

KEY STATISTICS IN PITT'S LOCAL ECONOMIC BALANCE SHEET

Minimum aggregate extra income value of local alumni's university education, on lifetime basis	$2.4 billion
Annual net cash inflow to the greater Pittsburgh area, through outside funding of the University's operations	$100 million
Jobs created directly by the University's annual operating expenditures	11,000
Taxes paid to city, county and state governments (1970 basis without full state income tax)	$4.3 million
University services to itself and the community that might otherwise have to be paid by the city, for the most part . .	$3.0 million
Total University expenditures on new construction since 1908, in Oakland (portion spent locally)	$180 million
Increased Ward 4 annual local taxes from stimulating effect of the University on building assessment in its area . . .	$1.2 million
Annual expenditures by visitors to the Oakland campus of the University	$3.1 million
Multiplier effect of all direct local expenditures by the University, its employees, and students, in increasing local incomes and employment	2.0 x original
Range of annual local taxes that a profit-making business would likely have to pay if it occupied the Oakland campus and buildings	$3 to $6 million

View From Soldiers and Sailors Memorial

II

HIGHLIGHTS

A. UNIVERSITY OF PITTSBURGH'S ECONOMIC IMPACT ON COMMUNITY IS A DIRECT CASH OUTLAY OF $91 MILLION A YEAR, 70 PER CENT FROM OUTSIDE THE LOCAL AREA

Using methods developed in 1970 by the American Council on Education, a team of independent researchers has traced a direct impact of $91 million a year by the University of Pittsburgh on the local economy. Analysis of the sources of this money indicates that about 70¢ on every dollar comes from outside the immediate area of the city and county.

The work, carried out by the Educational Systems Research Group of Washington, D.C., was under the direction of Dr. John Caffrey. George Mowbray was Principal Investigator on the study. It was sponsored by the United States Office of Education and the Buhl Foundation, and formed part of Pitt's University-Urban Interface Program.

B. IN ADDITION TO THE DIRECT IMPACTS, PITT ALUMNI NOW LIVING HAVE GAINED AT LEAST $6 BILLION IN EXTRA LIFE INCOMES AS A RESULT OF THEIR EDUCATION; 40 PER CENT OF THEM STILL LIVE IN AND AROUND PITTSBURGH

A computerized analysis of the location and schools of graduation of the existing alumni turned up records on 81,000 people (some are not on the rolls). Many are graduates in law and medicine and other professions. Further work is being done to analyze the secondary economic implications of the location and work of the graduates of the University. Initial estimates indicate that a $6 billion net gain to lifetime incomes would be very conservative -- only about $2,000 a year each for 72,000 of the grads, for 40 years. The total impact, including that of the 32,000 alumni who still live in or near the city, is a sum about 44 times the historical cost of building the Oakland campus, and about the same multiple of the University's current annual operating budget.

C. FEDERAL AND STATE AGENCIES CONTRIBUTE 55 PER CENT OF PITT'S OPERATING BUDGET, LAST YEAR TOTALLING $124 MILLION. INCLUDING GOVERNMENTAL AND STUDENT CONTRIBUTIONS TO COSTS, THIS MEANS THAT 70 PER CENT ($100 MILLION) CAME INTO THE CITY FROM OUTSIDE SOURCES

Examination of the sources and allocations of the University of Pittsburgh's operating funds indicates that the school is a vast inter-regional transfer mechanism. Private, state, and federal funds flow through it into the local economy -- about $100 million a year.

D. $45 MILLION OF THE $91 MILLION IN LOCAL IMPACT IS DIRECTLY FROM THE UNIVERSITY, THE REST FROM EMPLOYEES AND VISITORS

Here is the summary of the major categories:

Average annual construction	$15 million
University purchases	20
Other local payments	10
Local purchases by faculty & staff	30
Students' local purchases	13
Visitors' outlays	3
Annual Total	$91 million

E. HISTORICAL IMPACT OF BUILDING THE CAMPUS IN OAKLAND HAS BEEN 20,000 MAN-YEARS OF WORK, $75 MILLION IN MATERIALS AND EQUIPMENT, $105 MILLION PAYROLL IN PITTSBURGH

Since 1908, the University has spent $123.0 million on new construction.[1] Another $89.5 million has been committed or spent on uncompleted current projects. The $212.5 million means $105 million in local wages and salaries over the years, 20,000 man-years of work, $75 million in local purchases of building materials and equipment. In addition, there is another $172 million on the drawing boards to meet the University's objectives in the near future. The campus development program is a major element in the expansion of the city.

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[1] According to the financial statements of the University for June 30, 1971, the book value of the campus is $205.5 million. This includes land, some properties not in our analysis, and renovations and improvements made since initial construction.

F. DESPITE LOSS OF 63 ACRES OF TAXABLE LAND SINCE 1950 AS A RESULT OF CAMPUS EXPANSION, OAKLAND ASSESSMENT HAS INCREASED 35 PER CENT, THE SAME AS ASSESSMENT IN THE CITY AS A WHOLE

Unlike nearby wards, such as Ward 5, Oakland Ward 4 has kept up with local development -- on a par with the city as a whole. It is likely, but cannot be proved, that the stimulating effect of university activities has been responsible for this.

G. A HYPOTHETICAL BUSINESS WITH A PLANT AND BUDGET OF THE SAME SIZE IN THIS LOCATION WOULD PAY TAXES OF $3-6 MILLION A YEAR. THE UNIVERSITY HAS HAD OFFSETTING FAVORABLE EFFECTS ON LOCAL BUSINESS AND THE TAX BASE

The evaluation of municipal revenues, if University property were used for a business with profit-making purposes, suggests a figure between $3 million and $6 million per year. However, the University also brings $91 million in new business to Pittsburgh each year. And it has apparently had a stimulating effect on assessment and tax revenues in its surrounding district of Oakland. In Ward 4, tax revenues have increased by as much as $1.2 million since 1950, due to increasing assessment values.

Pitt also supplies itself with $800,000 a year in municipal-type services that would otherwise have to be provided by the city. The University also produces medical-social services of diverse kinds that would in other cities likely be paid for by outside agencies -- medical care for indigents, training programs and studies in research projects, part of the budget of the Falk Clinic ($400,000 a year), and work done by the University's dental clinic. All told, this package of services costs at least $3 million a year.

H. PITT JOB IMPACT IS LIKELY ABOUT 17,000 CONTINUING POSITIONS INCLUDING FACULTY AND STAFF OF 4,700

In addition to the 4,700 members of the University faculty and staff in the study year (1970), the $91 million in University-related expenditures and their local multiplier effects meant an additional 12,000 jobs, or a total of about 17,000 including those at the school itself. This is based on a conservative estimate of 70 jobs for every $1 million of net new expenditure in the community.

J. UNIVERSITY EMPLOYEES PAY AT LEAST $4.3 MILLION A YEAR IN STATE AND LOCAL TAXES

In addition to the incomes, and hence the taxes paid by other people whose jobs depend on the University, Pitt employees themselves paid 1970 taxes estimated at $4.3 million. This figure does not include auto registrations and it does include an estimate of state sales tax (6 per cent). Of the total, 45 per cent went to the city, 33 per cent to the county, and 22 per cent to the Commonwealth. When a full year of state income tax is included, the Commonwealth share will rise to 36 per cent.

K. THE LOCAL IMPACT OF THE PITT OUTLAYS IS DOUBLED IF THE ANALYSIS IS EXTENDED TO THE EIGHT OTHER UNIVERSITIES AND COLLEGES IN THE AREA

Analysis of enrollments and operating budgets indicates that the University of Pittsburgh is about the same size as the other eight schools combined: Carlow, Carnegie-Mellon, Chatham, Duquesne, Point Park, Robert Morris, Allegheny County Community College, and the Pittsburgh Theological Seminary. By the same token, the combined impact of the group on the local economy is just that much larger.

L. EXTENSION OF STUDY RECOMMENDED TO OTHER SCHOOLS, WITH FURTHER ATTENTION TO OTHER ASPECTS OF COMMUNITY RELATIONSHIPS

The nine colleges and universities in the area should collaborate in analyzing and publicizing their impact on the business life of city and county -- and on the commonwealth.

In addition, some of the more subtle human and cultural impacts of these institutions might well be studied as an extension of studies begun under the present University-Urban Interface Program.

These and other studies are a sign that the colleges and universities are becoming more conscious of their varied roles in the community. In many places, institutions of higher learning are taking steps to explore their ideas and goals through analysis and consultation with members of the public.

Readers of this study of the University of Pittsburgh's impact on the local community should keep in mind the many dimensions of the University that are beyond its practical business aspects.

In The Response of an Urban University to Change, Vol. 1 of a Report to the Commission on Institutions of Higher Education of the Middle States Association of Colleges and Secondary Schools, March, 1971, the University of Pittsburgh summarized many of these things -- with respect to the character of the institution, the changes in academic programs, community relationships, administration, and the objectives of the University. Examples of its outreach:

- 45 programs for minority group students, costing nearly $3 million and involving more than 3,000 people;
- International programs to help schools in more than 40 other countries;
- Information and consultation through the faculty and administration, to local public agencies and service organizations;
- Special pre-collegiate instructional programs; continuing education programs;
- Dental, medical, speech, psychological and educational clinics, experimental schools;
- Library and sports facilities for public use;
- Encouragement to students and staff to work in volunteer roles in local service organizations.

Of course, the University cannot assume direct responsibility for solving major social problems beyond its capacity to influence society. In the allocation of its limited resources, teaching and research continue to receive first consideration. But many other outreaches occur as well.

Convocation In Syria Mosque

III

THE BROADER IMPACT: HUMAN CAPITAL

A. A UNIVERSITY IS MUCH MORE THAN A BUSINESS

Although this study deals with the direct economic impact of the University of Pittsburgh on its surrounding community, it goes without saying that Pitt's impact extends far beyond the boundaries of economics. Universities diversify and enrich the quality of life. Many manifestations of the University might be cited. In the case of Pitt, the human and cultural effects of the hospitals and the medical and dental schools come immediately to mind. In other contexts, citizens can attend part-time classes, go to concerts, see games, and in general enjoy social contacts they might not have in the absence of a major university.

The over-riding purpose of the University is to educate people in many ways, both inside and outside its classrooms. In pursuing these educational objectives, the University becomes an important business, acquiring and using human and material resources. But these are the means, not the ends of its missions. The central function of the University is to develop people.

The development of the individual through learning and other kinds of life experience is sometimes described as the building of "human capital".[1] The idea of human capital calls up a certain image of man -- one in which the individual is envisaged as a producing unit like a machine. However, instead of being invented, manufactured, or modified, a person's internal resources and skills are increased by one or another form of education and experience.

Human capital thus has an economic focus. There is nothing new in this. People have long believed that education enhances their future earnings. One often goes to school primarily to seek riches. This is not to say that education should be regarded as mostly or only a job-training device. Aristotle remarked to a friend that education is an

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[1] See Gary S. Becker, Human Capital (New York, Columbia University Press, 1964). See also A Degree and What Else? a report by Stephen B. Withey for the Carnegie Commission, as reported in the New York Times, October 6, 1971. Published by McGraw-Hill, November, 1971. See also U.S. Bureau of the Census, Current Population Reports, Consumer Income, Series P-60, No. 74, U.S. Government Printing Office, Washington, D.C., 1970.

ornament in prosperity and a refuge in adversity. That was an ancient remark. Although it still has relevance, we have come to realize that post-secondary education is valuable, and in some cases essential, for people in a modern scientific-industrial society. This generalization remains true despite concern about an oversupply of people with certain specific skills.

B. LIVING PITT GRADS ARE WORTH $6 BILLION IN EXTRA HUMAN CAPITAL

The accompanying tables show the number and location of the living graduates of the various schools of the University as counted in the summer of 1971. Using generally accepted published data on the value of a university education -- over and above that of one stopped at the end of high school, we have calculated that the 81,000 living Pitt grads have a lifetime earnings differential of $6,000,000,000.[1] This is a conservative estimate because some alumni are not on the rolls, many are in upper income brackets in the health professions, and future inflationary effects are not included. In addition, the calculation is based on 72,000 people with average lifetime earnings advantages of only about $81,000 each -- over 40 years -- whereas a figure in the order of $150,000 or $200,000 would not be considered unreasonable by some economists.

In such calculations, much depends on assumptions about sex distribution, labor force participation rates, and other things affecting family income. For example, Dr. Withey estimated that the total family income of families whose head was a 4-year college graduate was $3,550 more (in 1968) than that of families headed by a person with high school graduation only. That implies a 40-year earnings differential of $142,000. If we take the Bureau of the Census data on males only, for 1968, the differential is $180,000. Hence our statement that on the average for men and women the lifetime differential of $81,000 is rather conservative. Also, we do not take into account the special income advantages that national data suggest accrue to people with degrees higher than B.A. On this sector of educational graduates, Dr. Withey says that 39 per cent of holders of advanced graduate or professional degrees were

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[1] The calculations were made by Mr. Harvey Weissman, research assistant to Professor Edward Sussna, Graduate School of Business, University of Pittsburgh. Professor Sussna has done other work in this field, and is continuing research on the human value generated by the University of Pittsburgh. Note that the valuation does not include offsetting costs of education to the recipients.

heads of families with more than $15,000 income in 1968, as compared to only 11 per cent for high school grads.

We are conscious, of course, that a university education also expresses the potential of the individual, as well as developing it. Pitt students' learning experiences do not necessarily "cause" their increased income, and the correlation is displayed in the knowledge of these hidden underlying causal factors. On the other hand, the University also often brings out the real person, thus liberating many productive spirits -- with higher incomes being only a part of this beneficence of learning.

We should also keep in mind, of course, that the $6 billion is only for the living graduates who have finished their Pitt education. It does not take into account those who have lived and died in the past; nor those who will be added to the sum total of human capital effects in future. Nor does it allow for probable future increases in prices and gross incomes.

C. $6 BILLION IN HUMAN CAPITAL IS EQUAL TO A $2.2 BILLION ANNUITY FUND

At an interest rate of 6 per cent, suggested by Pittsburgh annuity experts, a total fund of $6 billion ($150 million a year for 40 years), has a present-day value of $2.2 billion. That is the sum which, if invested at 6 per cent interest, would buy $150 million a year for 40 years. It represents about $2,000 per year per graduate -- and again we say that this is a low estimate. However, at 6 per cent, this means a human capital value of approximately $30,000 on a year-to-year basis. So a university education is like having $30,000 in the bank for a lifetime, on the average. For senior professionals, the figure is many times this. For example, a physician with a $100,000 a year income instead of a $10,000 income, and an active practicing career of 30 years, would have the equivalent of an endowment worth $90,000 a year for this period. While this may seem an extreme example, it serves to illustrate the upper ranges of the value of education. The annuity would cost the doctor something in excess of $2-1/4 million.

To many people, therefore, the increased income gained through a university education is worth the cost. Such computations do not, moreover, include the cultural rewards that accrue to students.

The many people and institutions supporting higher education do not do so in order to bring direct economic benefits to either the students or the surrounding community. Endowment funds and annual alumni gifts, monies from state and federal agencies, student fees -- all these do have a measurable impact on the local economy. But this impact is of strictly secondary importance in the perspective of the educator trying to develop and impart knowledge and teach students how to develop themselves in the process of learning.

And yet the university as a business is a little-understood phenomenon. It seems hard to believe that the millions of words that have been written on educational costs have not been matched by analysis of what happens to educational funds in the distribution process. Billions of dollars are spent in the United States without anyone seeing what happens to them when they leave the coffers of the spending institution. That is what this study is about. Our treatment of human capital is included to relieve us in some measure of the charge of over-emphasizing the more mundane aspects of education.[1]

D. PITT'S HUMAN CAPITAL IS FOCUSSED ON PITTSBURGH

The table on percentage distribution of the living Pitt alumni shows that about four out of every ten Pitt grads still live in the area, within Allegheny County. Of these, three-quarters live in the City of Pittsburgh proper. More than 60 per cent of the grads live in the Commonwealth of Pennsylvania. A glance at the male-female differences will show that the proportion of women (half the grads) living in the state is considerably higher than the proportion of the men.

If we convert the alumni distribution table into an analysis of human capital, the following inferential facts emerge:

. Pitt grads in the city represent $1-1/2 billion in added lifetime income. This and other such figures grow or decline with the flow of grads.

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[1] Dr. Withey, in the Carnegie report already cited, touches on some of the other benefits of education.

University of Pittsburgh Alumni
By Sex, School and Place of
Residence, 1971

MEN (69%)

	BUS	CAS	DEN	EDU	ENG	FAS	LAW	LIS	MED	NUR	PBH	PHA	PIA	SSW	GEN	Area TOTALS
City	2774	3115	567	1728	2669	299	952	36	804	3	47	645	129	91	483	14,342
Other County	961	1250	433	820	1171	270	225	35	343	2	78	263	145	58	110	6,164
Total County	3735	4365	1000	2548	3840	569	1177	71	1147	5	125	908	274	149	593	20,506
Other State	1524	2574	1497	2818	2006	417	583	71	652	7	65	782	208	106	202	13,512
Total State	5259	6939	2497	5366	5846	986	1760	142	1799	12	190	1690	482	255	795	34,018
Other	3480	4425	1441	2091	4796	1467	287	176	1317	10	521	702	837	273	204	22,027
Total	8739	11364	3938	7457	10642	2453	2047	318	3116	22	711	2392	1319	528	999	56,045

WOMEN (31%)

	BUS	CAS	DEN	EDU	ENG	FAS	LAW	LIS	MED	NUR	PBH	PHA	PIA	SSW	GEN	Area TOTALS
City	227	1781	121	4095	14	376	42	322	77	485	42	74	60	217	217	8,150
Other County	101	624	33	1184	7	153	10	190	24	250	26	32	27	100	40	2,801
Total County	328	2405	154	5279	21	529	52	512	101	735	68	106	87	317	257	10,951
Other State	138	1051	90	2550	13	306	17	286	22	644	28	95	33	114	30	5,417
Total State	466	3456	244	7829	34	835	69	798	123	1379	96	201	120	431	287	16,368
Other	455	2213	59	2935	34	559	23	931	98	894	136	89	125	481	79	9,111
Total	921	5669	303	10764	68	1394	92	1729	221	2273	232	290	245	912	366	25,479

Grand Total	9660	17033	4241	18221	10710	3847	2139	2047	3337	2295	943	2682	1564	1440	1365	81,524

University of Pittsburgh Alumni
By Sex, School and Place of
Residence, 1971

Percentage Distribution[1]

MEN (69%)

	BUS	CAS	DEN	EDU	ENG	FAS	LAW	LIS	MED	NUR	PBH	PHA	PIA	SSW	GEN	TOTAL
City	29	18	13	9	25	8	44	2	24	-	5	24	8	6	35	18
Other County	10	7	10	6	11	7	10	2	10	-	8	10	8	4	8	8
Total County	39	25	23	15	36	15	54	4	34	-	13	34	16	10	43	26
Other State	16	15	35	15	19	11	27	3	20	-	7	29	13	7	15	17
Total State	54	40	58	30	55	26	82	7	54	-	20	63	30	17	58	42
Other	36	25	34	11	44	38	13	8	39	-	55	26	54	19	15	27
Total	90	66	92	41	99	64	96	15	93	1	75	89	84	36	73	69

WOMEN (31%)

City	2	10	3	22	-	10	2	15	2	21	4	3	4	15	16	10
Other County	1	4	1	6	-	4	-	9	1	11	3	1	2	7	3	3
Total County	3	14	4	28	-	14	2	24	3	32	7	4	6	22	19	13
Other State	1	6	2	14	-	8	1	13	1	28	3	4	2	8	2	7
Total State	4	20	6	43	-	22	3	39	4	60	10	8	8	30	21	20
Other	5	13	1	16	-	14	-	45	3	39	15	3	8	34	6	11
Total	10	34	8	59	1	36	4	85	7	99	25	11	16	64	27	31
Grand Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

[1] Totals may not add because of rounding

University of Pittsburgh Alumni
By School and Place of
Residence, 1971

SUMMARY TABLE

NUMBER

	BUS	CAS	DEN	EDU	ENG	FAS	LAW	LIS	MED	NUR	PBH	PHA	PIA	SSW	GEN	Area TOTALS
City	3001	4896	688	5823	2683	675	994	358	881	488	89	719	189	308	700	22,492
Other County	1062	1874	466	2004	1178	423	235	225	367	252	104	295	172	158	150	8,965
Total County	4063	6770	1154	7827	3861	1098	1229	583	1248	740	193	1014	361	466	850	31,457
Other State	1662	3625	1587	5368	2019	723	600	357	674	651	93	877	241	220	232	18,929
Total State	5725	10395	2741	13195	5880	1821	1829	940	1922	1391	286	1891	602	686	1082	50,386
Other	3935	6638	1500	5026	4830	2026	310	1107	1415	904	657	791	962	754	283	31,138
Total	9660	17033	4241	18221	10710	3847	2139	2047	3337	2295	943	2682	1564	1440	1365	81,524

PERCENTAGE DISTRIBUTION[1]

City	31	28	16	31	25	18	46	17	28	21	9	27	12	21	51	28
Other County	11	11	11	12	11	11	10	11	11	11	11	11	11	11	11	11
Total County	42	39	27	43	36	29	56	28	39	32	20	38	22	32	62	39
Other State	17	21	37	29	19	19	28	16	21	28	10	33	15	15	17	24
Total State	59	60	64	72	55	48	84	44	60	60	30	71	37	47	79	63
Other	41	38	35	27	44	52	13	53	42	39	70	29	62	53	21	38
Total	100	98	99	99	99	100	97	97	102	99	100	100	99	100	100	101

[1] Totals may not add because of rounding

- The County of Allegheny has gained people with an aggregate present lifetime earnings increase of at least $2.4 billion (including the figures for the city itself).[1]

- The Commonwealth of Pennsylvania has a major share of the economic gains to residents from their education at the University of Pittsburgh: 60 per cent of the human capital equals about $3-1/2 billion. This is added lifetime incomes from Pitt grads who still live within the state.

- About 40 per cent of the increase in human capital has in whole or in part accrued to other jurisdictions. To a degree this can be inferred from the current geographical distribution of Pitt grads. Whether these and future graduates will congregate to a greater or lesser extent in Pennsylvania is not known. This figure does not allow for graduates of out-of-state schools who have since migrated to Pennsylvania.

E. THE UNIVERSITY'S SCHOOLS EXHIBIT DIFFERING GEOGRAPHICAL PATTERNS IN THEIR GRADUATES

As can be seen from the table on the percentage distribution of living Pitt graduates, the figures for the individual schools differ markedly in some instances from those in the overall "total" column at the right. This table could be subjected to a lengthy review that would be interesting on several grounds. For our purposes, however, the following observations are relevant:

- More than half of the law school's graduates live in and around Pittsburgh. All but 17 per cent of Pitt's lawyers still reside in Pennsylvania.

- The distribution of physicians is less local than that of the lawyers (who presumably tend to practice in the state whose legal system they know best).

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[1] It should be remembered that this is a measure of extra income that university grads earn in comparison with those without the advantages of a university education.

Even so, 58 per cent of the doctors are still within the Commonwealth, 37 per cent of them in the city or in Allegheny County; 42 per cent live in other states or in foreign countries. The distribution of dentists is very similar to that of doctors.

- The human capital represented by the lawyers, doctors and dentists cannot be estimated specifically with available data. Dr. Withey suggests they earn, on the average, 26 per cent more than graduates with only a bachelor's degree. We note that a total of 5,500 Pitt grads is included in these lucrative professions.

- Graduates in engineering have much the same pattern of residence as those of medicine: 55 per cent of the engineers live within the state, 35 per cent in Allegheny County. The remaining 45 per cent are outside Pennsylvania.

- Graduates in business courses, 9,660 of them, represent one of the more numerous groups, comparable to the 11,000 engineering grads. Some 58 per cent of them still live in the Commonwealth, 42 per cent in and around the city, and 41 per cent out of state.

- The schools of nursing, education, library and information sciences, and social work have relatively large female populations -- 68 per cent as compared with 31 per cent overall. Two-thirds of these graduates still live in Pennsylvania, two out of every three of them still within Allegheny County.

F. HUMAN CAPITAL MUCH LARGER THAN PHYSICAL PLANT VALUE

Depending on how certain properties are treated in the analysis, we have calculated that the University of Pittsburgh cost about $147 million to buy and build, up to 1970 (including land costs). This is a very modest estimate, excluding certain parcels of land. It is much smaller than the present book value of the institution as shown on its balance sheet ($205.5 million), a figure which also includes many repairs and renovations over the years. The replacement value of the campus would be about $350 million at present-day building costs.

These sums range from 2 per cent to 5 per cent of the value of the human capital in just the current roster of graduates. It is also rather interesting to note that $147 million is only about $20 million more than last year's operating expenditures, and that a sum of money equal to 2-1/2 years operating budgets would completely replace the existing physical plant. Also, the annual "cost" of capital structures that last, say, 50 years, is quite small -- and would likely be less than 5 per cent of almost any university's annual expenditures on operations. The implication is that it pays to build "quality", and to build structures sooner rather than later.

Digital Computing

IV

SOURCES OF UNIVERSITY OPERATING REVENUE

Although at one time the University of Pittsburgh was predominantly a privately funded institution, it now depends increasingly and vitally on state and federal support to achieve its educational objectives. Students and governments have become the major sources of its revenues. Where the money comes from to operate the University is germane to questions as to what it does with the money -- which is the subject of our study. Private contributions are still crucially important, on both capital and operating account.

The accompanying table summarizes the sources of income of Pitt in the year ended last June: of the $125 million in annual revenue, the Commonwealth of Pennsylvania was the largest single supplier. By consolidating the tabular material, we can see the following major sources: ($ millions)

Supplied by:	Revenue $	% Total %
Student tuition and fees	27.5	21.8
Pennsylvania	38.4	30.5
Federal agencies	28.5	22.6
Gifts, endowment and other	31.4	25.1
	$125.8	100.0

The accompanying t[illegible]e provides additional information on these revenue source[illegible]:

- The Commonwealth of Pennsylvania's total includes $600,000 in research funds which otherwise would be included under the heading of "sponsored research";
- The Pennsylvania appropriation of $37.8 million is largely (70 per cent) for reduction of tuition that would otherwise have to be paid by students from within the state;
- The "gifts, endowment and other" income includes not only the last three items on the table, but also research sponsored by agencies other than those of the state or federal governments.

UNIVERSITY OF PITTSBURGH REVENUES

FOR THE YEAR ENDED JUNE 30, 1971

($ millions)

	Amount $	% Total %
Students -- tuition and fees	27.5	21.8
Commonwealth of Pennsylvania	(38.4)	(30.5)
Used for tuition of Pennsylvania residents	26.6	21.1
Used for operating purposes	11.2	8.9
Research	0.6	0.5
Sponsored Research	(31.8)	(25.3)
Corporations & Foundations	2.6	2.1
Federal government agencies	28.5	22.6
Other	0.7	0.6
Endowment income, gifts, grants, and student aid revenues	6.2	4.9
Auxiliary activities such as dorms, food services, book stores, sports, parking, and income from rental properties	11.9	9.4
Other Revenues	(10.0)	(8.1)
Western Psychiatric Institute and Clinic[1]	6.3	5.1
Sales of services and supplies	1.7	1.4
Organized activities relating to educational departments (Dental Clinic, Falk School, University Press)	1.0	0.8
Other	1.0	0.8
	125.8	100.0

[1] Funded from state and federal sources, and from patient fees.

Conference On Industrial Design Problem

V

MAIN TYPES OF UNIVERSITY EXPENDITURE

A. CAPITAL FUNDS ARE USED TO BUILD THE PHYSICAL PLANT

Through endowments, special gifts, and the financial support of the Commonwealth of Pennsylvania, the University of Pittsburgh uses capital funds for the improvement and expansion of its educational facilities.

As is explained in detail in the next chapter of our report, the University has been spending considerable amounts of public and private funds in recent years to improve and enlarge its facilities. These sums have been committed to construction to keep up with expanding enrollments and changes in the necessary quality of instruction and range of programs offered to students.

B. OPERATING FUNDS ARE USED TO SUPPLY EDUCATIONAL SERVICES

In the year ended June 30, 1971, the University of Pittsburgh spent $127.7 million on current operations, including $4 million in transfers to plant funds for debt servicing and capital projects. The net operating outlay was thus $123.7 million. It was spent for the following major functions: (in $ millions)

Item	Amount $	% Total %
Instruction, etc.	46.1	37.3
Sponsored research and programs	28.1	22.7
Libraries	3.5	2.8
Student services and aid	8.3	6.7
Maintenance	11.4	9.2
Overhead, general, and public service expenses	6.9	5.6
Interest on General Fund debt	1.1	0.9
Auxiliary activities	12.0	9.7
Other	6.3	5.1
	$123.7	100.0

One of the purposes of this study is to discover where, and on what, the foregoing expenditures were made. Some of the expenditures were made on behalf of one or another of the University's four regional campuses outside Pittsburgh. These campuses would be a suitable subject for future examination of the University's regional economic impact, but they are not discussed here. Systematic presentation of cost/benefit for regional campuses generally would be facilitated by a regional adaptation of the Caffrey-Isaacs models -- as part of the general trend towards accountability in all parts of the institutional expenditure pattern.

C. REGIONAL CAMPUSES ARE STILL A SMALL ELEMENT IN BUDGET

The regional campuses -- Bradford, Greensburg, Johnstown and Titusville -- were responsible for a little more than $5 million out of the $123 million in 1970-71 expenditures for university operations (that is, about 4 per cent). Of this, $3 million went for local salaries and related non-wage elements of compensation. The regional campuses are thus largely local phenomena in terms of direct economic effects -- hiring people, using local supplies, and procuring from Pittsburgh only those items centrally purchased. The weight of the regional campuses will no doubt grow in future years. However, at present, the figures that include the reports of their activities are not unduly distorted by the inclusion. The overwhelming proportion of Pitt outlays center on the city and its environs, with longer-distance procurement of items not available on suitable terms close at hand.

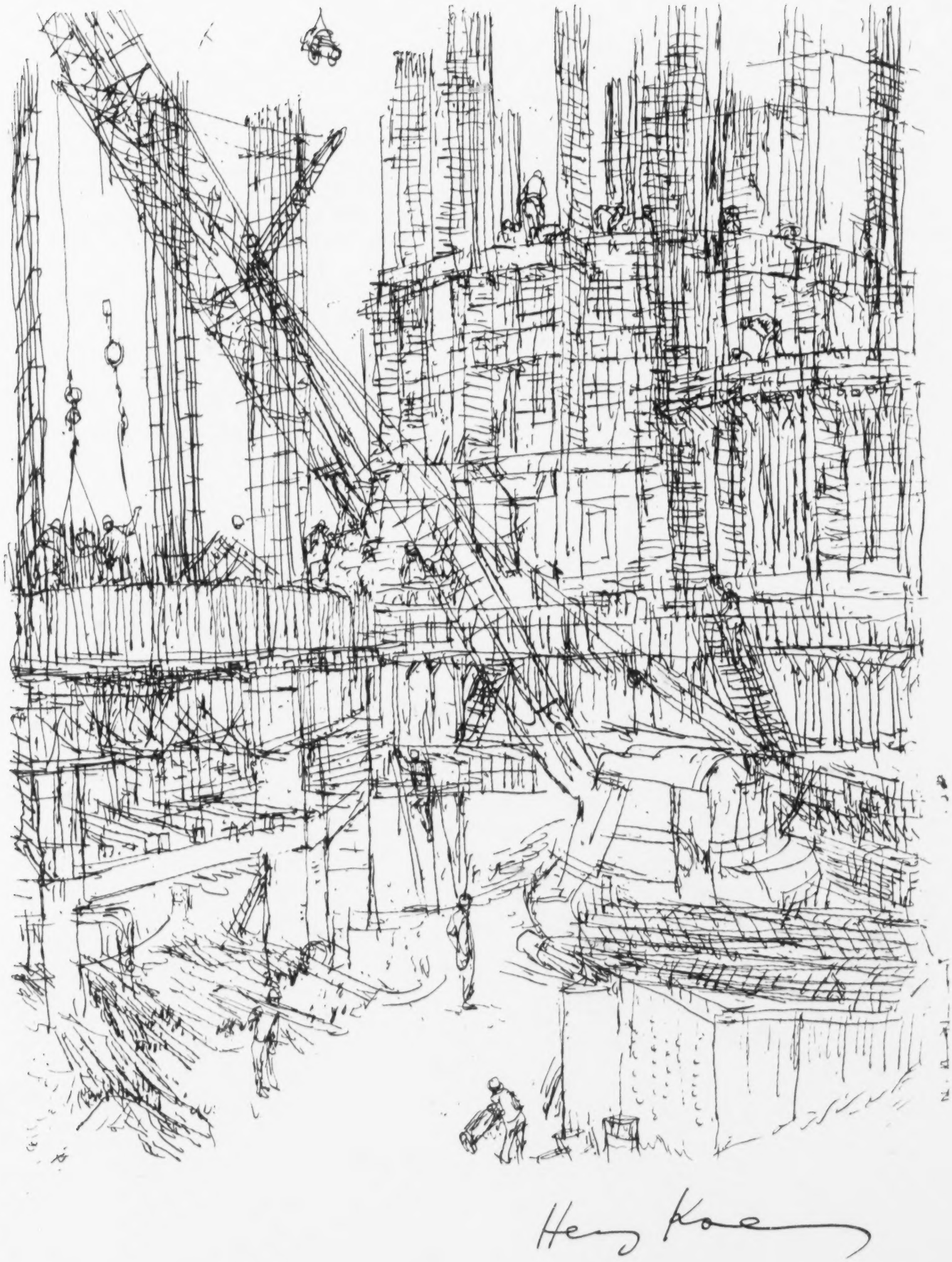
D. COSTS OF HUMAN RESOURCES DOMINATE EXPENDITURES

Since universities are providers of educational services, it is not surprising that salaries and wages are a very large item in their annual operating budgets: Pitt's amount to about $74 million per year, or some 60 per cent of the total operating budget.

The direct economic effect on the community of a business with payrolls equal to 60 per cent of total expenditures is greater than would likely be the case with a manufacturing plant with much smaller labor costs and proportionately more materials and equipment brought in from other places.

It is a well known proposition in economics that service industries are dominated by the costs of providing

the services through people. This is one reason why questions of productivity in the service industries are of such great moment these days. Indeed, efficiency in the provision of educational services is a much more important question than the degree of opulence in university building construction, as we have already seen by implication. Thus a university is primarily an instrumentality for the rendering of personal services. The people who work in teaching and administrative jobs in the University are almost certain to live nearby and to have a proportionately strong effect on the culture and economy of the local community.



VI

IMPACT OF UNIVERSITY CONSTRUCTION

A. A UNIVERSITY'S DEVELOPMENT PROCESS IS COMPLICATED

As we know from our experience in the past few months at the University of Pittsburgh, a great university does not grow in simple and consistent ways. Many influences shape the pace and character of expansion. In particular, the spirit of the times and the men called forth for leadership roles have much to do with university growth. These in turn have their effects on the goals of the university, on its policies about relationships with its neighbors and citizens in the local area, on its financial policies and the level of tuition and student aid, on the standards of excellence or mediocrity implicitly prevailing on its decisions about curricula and physical plant and staffing.

The University of Pittsburgh is not a new institution. Its roots go back into the last century and in some respects beyond even that faraway time. As the University has grown, since 1787, amid the hustle and bustle of the steel industry, it has been subject to many influences which are beyond our terms of reference in this study.

During the past few decades, however, the University of Pittsburgh has set out in pursuit of combined goals of educational excellence and social service in the community -- even as Pittsburgh itself has worked to rise above the many-layered grime of a mill town. People who came back to Pitt after 30 years might find it hard to recognize the city, let alone the campus.

When a university grows, enlarging its physical plant, responding to new challenges to increase its student body, it buys, is given, or otherwise acquires properties for carrying on the instructional process. As anyone familiar with university records in any institution will know, the past can be hard to unravel. For this reason, we have to point out that although a serious effort has been made by the study team and its willing supporters within Pitt, the analysis of the impact of the University's historical construction program is not to be considered precise in any accounting sense. For example, in many cases available records show land and construction costs but not any of the important supplementary project costs of design, project management, etc. Some properties were given, others bought. How do you treat a site that was given to the University on condition that it buy a suitable alternative site elsewhere for the preceding occupant?

B. CONSTRUCTION HAS A POWERFUL LOCAL ECONOMIC IMPACT

An old rule in the construction industry still has much validity: buildings are half labor. That is, on-site labor costs are equal to about half the costs of construction. Our inquiries in Pittsburgh suggest that this proposition is still more true than most builders would like. They have been trying to defeat the high costs of on-site labor with new building techniques that will in effect build structures in pieces in remote plants and allow them to be shipped in modular units for putting in place on site. This is the essence of the so-called "systems approach" to construction, and so far it has only begun to show promise. In the past, therefore, and for a long time to come, a building project is going to mean many local jobs, especially relatively unskilled ones.

Construction is a largely local process. Except for sophisticated machinery such as elevators and electrical-mechanical equipment, buildings are still erected out of rather basic ingredients: structural steel, concrete or concrete products, wire and cable, finishing supplies. In the case of Pittsburgh and the commonwealth, local supplies of steel are ample and no doubt incorporated in a good many local construction projects. Cement, aggregate, and other heavy materials cannot be shipped economically any appreciable distance. They have to be supplied locally. This is why job-creating programs to combat local unemployment often put heavy emphasis on construction: its high labor content guarantees a big increase in jobs.

C. 85 PER CENT OF CONSTRUCTION EXPENDITURES STAY IN PITTSBURGH

We made a number of inquiries of local construction companies and of University officials who deal with them. The following generalizations emerge:

- Almost all labor costs of construction are an addition to the Pittsburgh economy.

- About 70 per cent of the material costs of construction are also likely to be spent locally. The proportion of labor to materials is also tending to rise despite efforts to cut it down.

- The total labor costs plus 70 per cent of the remaining one-half of the total cost, leaves only 15 per cent for non-local procurement. Hence the proposition that 85 per cent of Pittsburgh construction expenditures have a direct impact on the local economy.

D. PAST AND PRESENT CONSTRUCTION MEANS $180 MILLION IN WAGES AND LOCAL PURCHASES IN PITTSBURGH

Since the University of Pittsburgh began its main Oakland building program in 1908, it has spent $123.0 million on new construction, and has a further $89.5 million funded for immediate work or already partially completed. Interviews with construction companies indicate that about 85 per cent of this will be spent locally, by contractors, for labor, materials and equipment -- a total of $180 million out of the $212.5 million. (If funded, future planned construction to 1980 could add a further gross total of $172 million and a further $146 million in local outlays).

Of considerable consequence in this social arithmetic on construction is the fact that almost all the capital required will come from outside the city and hence will not likely mean the loss of alternative projects. The Commonwealth of Pennsylvania, through the General State Authority in Harrisburg, finances university construction, and arranges for the payment of debt-servicing charges.

Although future projects are inevitably probabilities only, we include them here along with comments on the impact of work already completed or still under way:

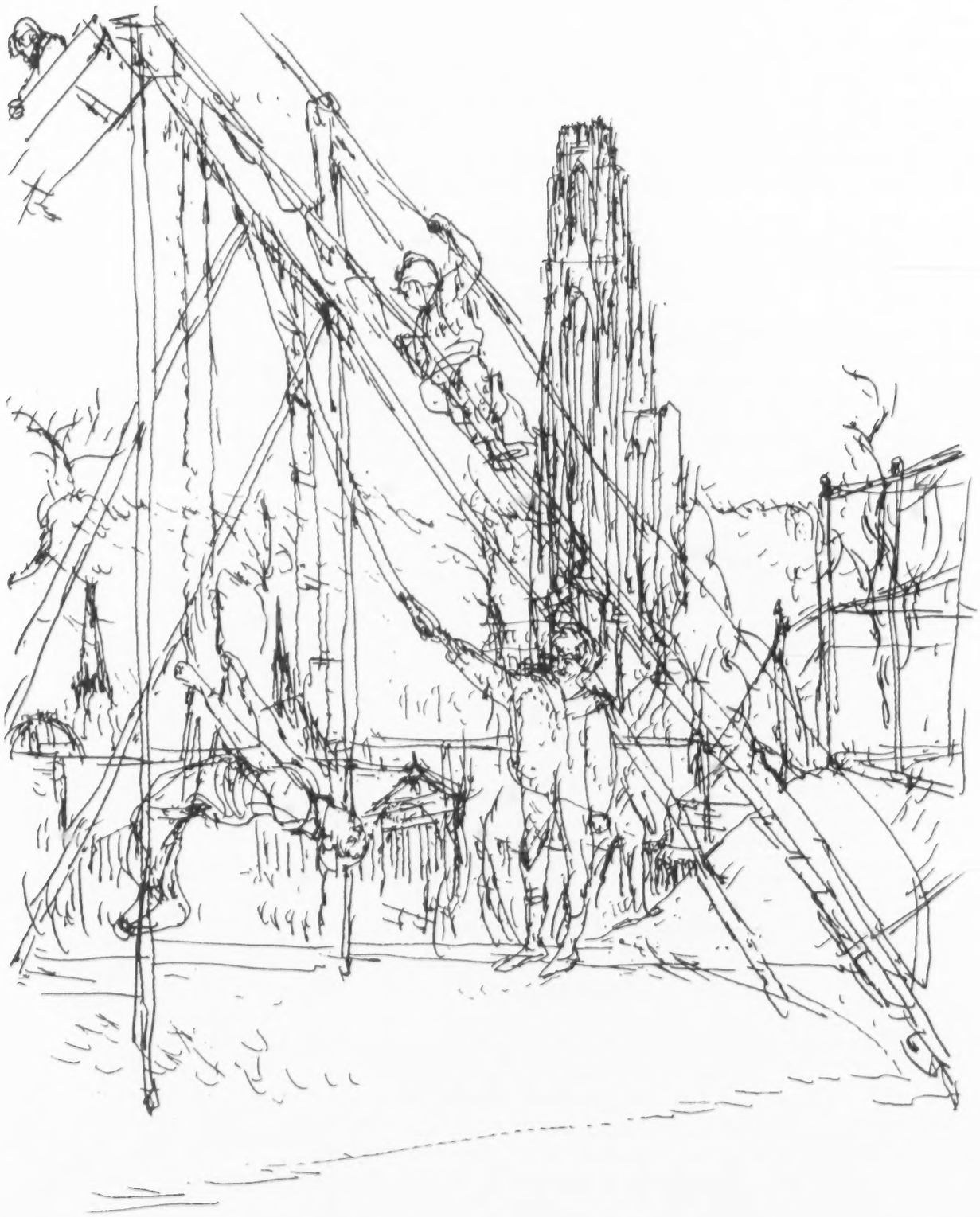
- The $212 million in past and current construction has a local direct labor impact (including unskilled, skilled and professional) of about $105 million.

- $105 million in wages and salaries, at a historical average of $5,000 per year (probably a high estimate) is the equivalent of 20,000 man-years of work.

- A further $75 million in local purchases of materials and equipment is comprised by the $212 million in building.

- Over the next ten years, another $146 million in labor and materials and equipment could be supplied from the Pittsburgh area if the future program is funded. The future building plans of the University thus become an important factor in city financial planning.

- The University of Pittsburgh is scheduled to remain one of the strongest growth stimulators in the metropolitan area, as matters now stand.



Frick Playground

VII

SOME EFFECTS OF TAX EXEMPTION ON LOCAL GOVERNMENT

A. THE UNIVERSITY OF PITTSBURGH CANNOT BE MADE LEGALLY LIABLE FOR CITY OR COUNTY TAXES -- BECAUSE IT IS (1) A NON-PROFIT ORGANIZATION AND (2) A DE FACTO INSTRUMENT OF THE STATE

Although tax-exempt institutions are becoming increasingly attractive as revenue sources for hard-pressed cities, Pennsylvania law prohibits taxation of the University of Pittsburgh by city or county governments. This, at least, is our understanding of the situation.

Two main points underlie the tax-exempt status of the University:

1. Under state law in the Commonwealth, a non-profit educational institution such as a University cannot be taxed by city or county governments. The same is true of churches, hospitals, schools, and other non-profit organizations;

2. With its state-related status, Pitt has become an instrumentality of the Commonwealth of Pennsylvania, a de facto state university. As a state enterprise it is not taxable by local governments. Evidence of its state-identity can be found in the fact that the state supports the University with its essential operating funds each year. It also finances new University construction. An increasing portion of the Pitt campus is now owned outright by the General State Authority.

The question of whether universities should or should not pay taxes or make other payments in lieu of taxes is not the focal point of our analysis in this chapter of the report. That question, indeed, may well be decided on grounds that have little to do with the measurement of local economic impact as we are dealing with it here. Our objective is a limited one. It is to suggest some ways in which the effects of tax exemption can be measured. Some readers may prefer one approach over another, for reasons of their own. Each is free to make his own choice. We have tried to assemble certain facts and to make certain judgments which may be useful but in our view are not likely to settle any of the public policy issues involved.

B. REVENUE LOSSES THROUGH EXEMPTIONS ARE HYPOTHETICAL IN NATURE

The University of Pittsburgh is exempt from taxation by municipalities and the state. Under present conditions, its so-called tax liabilities are therefore strictly hypothetical.

This does not mean that such hypothetical liabilities cannot be estimated. It simply means that one has to envisage the campuses of universities, or the lands of hospitals and churches, being occupied by private, profit-making organizations with the same economic characteristics as the exempt institutions. One could visualize a huge research institution, say, as part of a major American corporation being on the Pitt campus, with 4,700 hundred employees and a budget of $125 million a year. Estimating the shortfall of alternative levies on the campus in terms of "business" taxes is a matter of figuring out what some other kind of legally liable operation would have to pay if there were no exempt institution occupying the premises.

C. WE USE TWO METHODS IN THINKING ABOUT EFFECTS OF TAX EXEMPTIONS ON THE LOCAL ECONOMY

We use two methods in thinking about the effects of Pitt tax exemptions on the local economy:

1. The Caffrey-Isaacs Model

In the research report we are using as a guide, Caffrey and Isaacs suggested (p.25) that one might attribute to the university's presence a sum foregone in tax revenue proportional to its campus size -- in relation to the size of the taxing jurisdiction. This is dependent, of course, on simple jurisdictions and on an assumption that campus land values are the same as the average for the rest of the area.

2. Revaluation of the Campus for Assessment

Another approach is to figure out how much tax revenue the city and county would collect from the institution if there were a profit-making business in existence here instead of a school. This we have done in two ways, one with existing assessments and one at a higher level with a revaluation of university land.

D. OFFSETS IN REVENUE ARE GENERATED BY THE DEVELOPMENT OF THE AREA AROUND THE UNIVERSITY

Against the hypothetical taxes foregone because of the presence of the University on its campus locations, we tried to estimate the extent to which the expenditures of the institution, its employees and students and visitors,has stimulated the development and hence the tax base of the surrounding Oakland area -- which is mostly Ward 4. We have compared the tax and assessment history of Ward 4 with that of other areas in the city. These other areas have not had the stimulus of a major educational institution.

One of the more enlightening sources of perspective on the development of city districts is per-acre assessment in the various wards of the city. In Pittsburgh, the wards have differing characteristics and histories.

To provide additional depth to the analysis, we have selected the period from 1950 to 1970, when Pittsburgh underwent major changes in land use -- notably in the re-development of the core of the city and the expansion of several wards on the outskirts of the traditional downtown area. We should note, perhaps, for the benefit of readers not familiar with the city, that the main downtown district is the Point, where the Allegheny and Monongahela come together to form the Ohio River. As will be explained in more detail below, this area has been extensively rebuilt since 1950. People who work there live largely outside the area, and many who lived there before have moved elsewhere. Thus, many wards outside those in the center of the city have felt the impact of the modernized city center.

The analysis of how wards other than that near the University of Pittsburgh have changed in the last twenty years helps clarify the impact of the University on its neighbors. The question is, essentially, to what extent has university-stimulated development offset the diversion of land from the tax rolls? To the extent that this has taken place, the tax-exempt university might be considered a more attractive institution to municipal financiers than would otherwise be the case.

Finally, we should add one or two cautionary notes. The research we have conducted on this subject has been restricted by a lack of accurate and refined data -- especially on the multitude of forces that influence neighborhood development and decline. The City of Pittsburgh is a large and to a degree inscrutable phenomenon. Its growth, or lack of it, has been the result of many forces -- most

of them lying outside the sphere of influence of the University of Pittsburgh and the other universities of the city. We have tried to be conservative in formulating reflections on the facts of assessment change since 1950.

E. ON AN ACREAGE BASIS, HYPOTHETICAL TAX VALUE IS $370,000 A YEAR

The University of Pittsburgh campus in the Oakland district of the city consists of 125 acres of land, including land owned by or on behalf of the University and not yet used for construction of academic buildings. By contrast, the City of Pittsburgh has an official acreage of 28,954, excluding streets.

Of the 28,954 acres, 19,106.4 (66 per cent) are taxable, and the balance exempt from tax. Of the 9,848 tax-exempt acres, Pitt's 125 acres are 1.3 per cent of the city total. The city pattern or exemptions varies considerably from one part of the city to another. In Ward 4, where the University is located for the most part, only 57 per cent of the assessed acres are taxed -- reflecting the presence of Pitt and other educational and medical institutions.

In 1970, the City of Pittsburgh collected $46 million in real estate taxes. If we allocate to the University of Pittsburgh an implied tax bill equal to its share of the assessed land in the city, the sum is 125/19106 x $46 million, or $300 thousand. Note that this method prorates both land and building taxes on the basis of land areas. It also depends for its relevance on an assumed equality between university land values and those in the taxing jurisdiction as a whole.

Another variation on this method is to visualize the Oakland campus developed for single-family residences instead of in its present configuration, a not unreasonable assumption considering earlier land use trends that were changed with the appearance of Pitt in Oakland. If we use a figure of five lots per acre, the 125 campus acres would hold 625 dwellings, at the most. Taking a general estimate of $1,000 per household in city and county real estate taxes, the resulting revenue would be $625,000 per year for the two jurisdictions combined.

Coming back to the original method, that of using the campus area in relation to the city as a whole, we should note that the Allegheny County tax exemption cannot be dealt with in the same way because of the irrelevance of its larger land area to the computation. However, county real estate taxes are usually about 20-25 per cent of the

city's, or, in this case, a sum of about $70 thousand a year to be added to the $300 thousand computed for the city in the preceding analysis.

F. AN ALTERNATIVE PROFIT-MAKING ORGANIZATION MIGHT PAY $3 to $6 MILLION A YEAR DEPENDING ON ASSESSMENT OF LAND AND BUILDINGS

If we are to make a reasonably accurate appraisal of the taxes which a profit-making organization would pay if it occupied the Oakland campus, we have to have a more realistic evaluation of campus land and the 45 buildings on it.

1. Land Value Varies from $16 Million to $81 Million

The University and the Commonwealth have paid about $20 million for University land, including $8.1 million for land purchased with structures. This excludes the property of the Western Psychiatric Institute and Clinic, but does include recently purchased GSA properties. Of the 125 acres, 35 are still open for development on the "hill campus", but their use for construction will be long deferred because of the topography.

If, for computational purposes, we take an average campus land value of $15 per square foot ($653,400 per acre), the Oakland campus has a "market value" of $81 million. If we then apply the 50 per cent assessment valuation rule and a combined real estate and school tax of 78 mills for the city, one implied annual tax levy is $3.1 million. The corresponding Allegheny County tax levy would be $678,375. This makes a total hypothetical tax calculation of $3.8 million.[1] (Note that this related to land only, excluding the buildings on it).

For a comparative figure, we can look at the existing assessment records of the campus -- which we assembled with help from a number of people since it is a tedious chore to unravel the real estate history of a university the size of Pitt. The corresponding current assessment figure for the land of the campus is $8 million,

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[1] The 1970 tax rates used in this report are: for the City of Pittsburgh, 55 mills on land, 27-1/2 on buildings, with 23 mills on each by the School Board. Allegheny County rates were 16-3/4 mills on land and buildings.

implying a market value of $16 million, which is only one-fifth of our tentative re-evaluation. The corresponding city and school tax on this would be $625,000 with a further $134,000 for the county -- a total of $759,000 is another implied tax figure. Land value: $128,000 per acre.

The value of University property in Oakland -- a value which has been created to a substantial degree by the existence of the institution itself -- is much higher than that in the City of Pittsburgh as a whole. The city still has considerable low-value real estate, including undeveloped areas. In relating assessment to land value, the current rule is that assessment should be equal to half of the estimated current market value of property. Hence, if we double the city's assessed land value (not buildings) the resulting market figure is $804 million. With 19,106 acres of assessed land in the city, this implies an average value of only $42,000 an acre, or about $1 per square foot. This value, in turn, is only about 6 per cent of that estimated for the Pitt Oakland campus area, where recent transactions have been at $15 a square foot for commercial properties. While one could argue about assessment bases and market values, it is quite clear that the acreage formula suggested in the Caffrey-Isaacs book is not suited to analysis of institutions in the middle of urban areas.

To complete the analysis of the fiscal effects of the University's exemptions, we have to introduce the second element of assessment. In addition to land assessments, buildings in Pittsburgh are separately assessed and separately taxed.

In turning to this subject, we shall see that adhering to the official data produces the most satisfactory results, simply for a lack of alternatives that lie within our terms of reference and competence.

2. Building Valuation and Assessments

When we consider the valuation, for assessment purposes, of the buildings bought and built by Pitt, we have no reliable way of even approximating their current "market value". Hence we have decided to use the official Allegheny County assessment data. Unlike land, buildings are affected by depreciation in use. They may be more or less useful in alternative functions. Market value is safely determined only by the action of the market, in purchase-and-sale transactions.

However, for the purposes of this study, we do have certain key pieces of information:

- The original cost of the construction or purchase of Pitt's buildings in Oakland totalled $129 million, excluding land acquisition costs. This figure includes an estimated $5.8 million attributable to building value in properties purchased with usable structures on them. Except for one or two major renovations, the figure is original cost, and excludes subsequent improvements.

- Some of the structures have been demolished, and the others have depreciated in use. Their present market value is presumably well below historical cost, although this is just our opinion.

- Up to 1971, the official assessment on these buildings totalled $38 million, implying a current market value of $76 million. In relation to historical cost, this does not seem to us to be an unreasonable figure.

If we take the $38 million assessment[1], with 27.5 mills in city real estate tax plus 23 mills for the school tax (50.5 in all), the resulting hypothetical business tax to the city would be $1.9 million a year. A further $636,500 would go to Allegheny County on the same assessment base.

3. Summary of Direct Effects of Tax Exemptions

Use of the campus area by the University instead of a tax-paying "business" has the following hypothetical effects in terms of foregone municipal revenues:

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[1] This total of $38 million excludes certain valuable properties, such as the Western Psychiatric Institute and Clinic. It also excludes two new structures, Benedum Hall and Crawford Hall, with a combined construction cost of $15.2 million.

Basis of Estimate	Hypothetical Effect		
	City	County	Total
	($million)		
Higher Valuation of Land			
Assessment based on $81 million market value of campus property	3.1	0.7	3.8
Buildings taxed on basis of recorded assessment to date	1.9	0.6	2.5
1st Total	5.0	1.3	6.3
Lower Valuation of Land			
Assessment based on historical records, extent of revision not known, property at $16 million implied market value	0.6	0.1	0.7
Buildings taxed on basis of recorded assessment to date	1.9	0.6	2.5
2nd Total	2.5	0.7	3.2

If, therefore, the University campus were occupied by a profit-making organization of similar scale to the school, and if none of its property were owned by the state or city, then that organization would have to pay between $3 million and $6 million in real estate taxes.

We should point out here that this computation is "gross", not offset by the $1.2 million that Oakland residents may have generated in taxes because of the University's presence in Ward 4, nor the taxes that employees pay, nor the increased tax base stimulated by $90 million a year in University-derived business income in the local area. We should also note, perhaps, that the Pitt campus represents 6 per cent of the value of the City of Pittsburgh's tax-exempt land, itself about a third of the total non-street acreage of the municipality. Much of the land concerned is in the form of parks, but other examples are municipal properties, land occupied by other public and private educational institutions, churches etc.

G. THE UNIVERSITY HAS STIMULATED THE DEVELOPMENT OF THE CITY AND HAS INCREASED THE VALUE OF ASSESSMENTS IN OAKLAND

1. The University in the Pittsburgh Economy

The University is a growth center in the City of Pittsburgh. A steel and coal city for many decades, Pittsburgh has been undergoing diversification. Still, its population declined 23 per cent between 1950 and 1970, almost half of that decline in the past decade. Population in 1950 was 677,000, and 520,000 in 1970. Allegheny County grew 7.5 per cent between 1950 and 1960, from 1,515,237 to 1,628,587, presumably as people moved from the city to the surrounding area. Since 1960, the population of the county has declined slightly, so that area population appears more or less stabilized at present. The population of the city proper is about one-third of that of the county, which includes the city in its demographic data.

One of the instruments for stimulating urban growth has been a series of major urban redevelopment programs in the heart of the city. For the most part these have taken place in the last twenty years. As a result, the pattern of assessments and taxation has changed in differing ways in various parts of the city -- including Ward 4, in which most of the University of Pittsburgh's property is located.

We have already seen that the University has built millions of dollars in new structures in Ward 4, more generally known as the Oakland district. In terms of its operating expenditures as well, the University has been a positive factor in the growth of the Pittsburgh economy. In recent years, particularly with the support of funds from the Commonwealth of Pennsylvania during the past half decade, the University has greatly expanded its operations. Student enrollments, numbers of employees, and annual budgets have all increased, with consequent impact on the local economy. Since 1960, the annual operating expenditures of the University have grown from $33 million to $125 million. Later chapters of this report will explore the direct economic implications of this growth in a number of different ways.

In thinking about the indirect consequences of tax exemptions -- or, rather, offsets to these exemptions -- we can try to visualize what has happened to the level and value of property investments in Oakland as compared with some of the other wards of the city. Since 1950, the

University's Oakland properties have increased by 71.5 acres -- 62.4 of them tax exempt. That is 8 per cent of the total non-street area of Ward 4. Under the circumstances one might expect Oakland assessment to exhibit certain negative tendencies. This has not been the case, as we shall now see.

2. The University Area's Population Change Since 1950 Has Paralleled That of the City

Ward 4 and the city have both declined by 23-24 per cent in population since 1950. In both cases, population per acre has declined as might be expected. We are referring here to resident population. The accompanying table of resident population per acre shows that other wards have been much harder hit by resident population decline, others very little, and one has increased. The wards were selected to give a representative picture of Pittsburgh demographic changes.

Wards 1, 2, and 3 are in the heart of the downtown area of the city, where extensive redevelopment and commercial construction have reduced populations sharply. Ward 5, on the other hand, is a poor and mainly residential ward adjacent to the ward in which the main Pitt campus is located. It has suffered a major decline in population during the twenty-year period. It is tempting to argue that without the anchoring effect of the University, Ward 4 might also have declined much more in population. We are inclined to believe this but cannot prove it with statistical data. The main point is that Ward 4 has kept up with the general city trend in population change, while a good many others have not.

3. The University Area's Assessment Growth Since 1950 has Paralleled that of the City as a Whole

The accompanying table on taxable assessment per acre indicates that both Ward 4's total assessment, and that of the city as a whole, have grown by 34 per cent since 1950. Again, other wards have been either better or worse than this.

In this analysis, the situation in Ward 5 is more relevant. The university-supported businesses in Ward 4 (Oakland) are unquestionably the heart of the commercial life of the area. No one would argue that this is not the case. It is interesting to see that right beside this area, in Ward 5, assessment has remained virtually unchanged in the past twenty years.

RESIDENT POPULATION PER ACRE
IN SELECTED PITTSBURGH AREAS
1950 and 1970

Ward	Population		Net Acres	Population per Acre		
	1950	1970		1950 No.	1970 No.	% Change 1950-70
1	8,904	5,054	223.1	40	23	-43
2	3,840	2,367	336.7	11	7	-36
3	21,263	6,369	155.2	137	41	-70
4	32,121	24,152	765.7	42	32	-24
5	33,561	22,404	573.3	59	39	-34
7	19,279	15,848	450.6	43	35	-19
19	43,918	44,483	2,169.2	20	20	-
20	24,749	26,487	2,272.8	11	12	9
26	24,810	25,594	1,766.6	14	14	-
Entire City	676,806	520,117	28,954.0	23	18	-23

Notes: Ward 4 includes the main Oakland campus of the University of Pittsburgh, which occupies 16 per cent of the total assessed acreage of the ward. The exempt acreage of the university constitutes 38 per cent of the exempt acreage of the ward. Campus area: 125 acres.

The "city" proper, with 520,117 population in the 1970 Census, has 21.6% of the 2,401,245 residents of the Standard Metropolitan Statistical Area of greater Pittsburgh. This area is made up of four counties: Allegheny, Washington, Westmoreland, Beaver.

CITY OF PITTSBURGH
TOTAL TAXABLE ASSESSMENT PER ACRE, IN SELECTED WARDS,
1950 and 1970
% INCREASE OVER 1950 ON LAND, BUILDINGS AND TOTAL

Ward	Assessment per Acre		% Change in Assessment Since 1950		
	1950	1970	On Land Assessment	On Building Assessment	On Total Assessment
1	$289,991	$322,938	-32.0%	77.6%	11.4%
2	562,454	695,724	-17.5	99.3	23.7
3	88,982	149,403	1.0	108.4	67.9
4	65,617	88,064	13.6	45.4	34.2
5	33,348	33,232	-15.5	6.0	-0.3
7	79,349	126,928	17.7	86.6	43.1
19	22,352	31,917	- 3.2	65.1	42.8
20	8,871	21,096	78.2	161.8	137.8
26	12,794	16,804	- 0.1	43.1	31.3
Entire City[1] (All 32 Wards)	$27,871	$37,502	- 3.0%	61.0%	34.6%

[1] Between 1950 and 1970, Pittsburgh land assessment decreased from $412.7 million to $402.4 million. In the same period, assessment on buildings increased from $577.1 million to $929.5 million. Total assessment, as a consequence, rose by 34.6 per cent, from $989.8 million to $1,331.8 million. As shown in the table, the 61.0 per cent increase in building assessment offset the 3.0 per cent decline in land assessment, with a resulting overall increase of 34.6 per cent between 1950 and 1970.

The most striking feature of the Ward 4 situation, however, is that the assessments shown have grown despite the increase in the tax-exempt campus from 62 to 125 acres in the period between 1950 and 1970. The removal of properties and buildings from the tax rolls represents an immediate tax loss to city and county, as we have already noted. An area of 63 acres is equal to 8 per cent of Ward 4's net acreage (excluding streets). Despite the commensurate reduction in assessments, the over-all total has increased by 34 per cent since 1950.

4. University-supported Assessment Increases May Total $17 Million Since 1950

If Ward 4 assessment had followed the path of the neighboring Ward 5, it would not have changed since 1950. In fact, Ward 4 assessment increased from $50 million to $67 million in that period of time -- despite a reduction of about 8 per cent in the assessment base through university property acquisitions, or those by GSA on its behalf: (taxable assessment only)

	Ward 4 Assessment ($ millions)		
Year	Land	Buildings	Total
1950	18.2	32.0	50.2
1955	18.1	36.6	54.7
1960	17.2	48.9	60.1
1965	18.1	44.8	62.9
1970	20.7	46.7	67.4

From the figures above, we can see that assessment in land has increased by $2.5 million (14 per cent) since 1950, notwithstanding withdrawal of the university acreage already referred to (63 acres).

The bulk of the increase in assessment has come, as might be expected, from an increase in the assessed value of structures. If that building had not taken place and the values been increased -- in and around the university area -- then certainly the assessments would not have grown. Whether one can attribute the entire net gain to the presence of the University is debatable, but at least a portion of it must be considered an offset to municipal revenues foregone from the tax-exempt status of university-acquired properties.

5. Increased Assessment in University Area Might Represent $1.2 Million per year Tax Revenue That City and County Would Not Otherwise Get

At 1970 tax rates, the 1950-70 increase in Ward 4 land assessment means an annual total of $195,000 (0.078 x 2,500,000) per year to the city and school board in real estate taxes. Similarly, the $14.7 million increase in building assessment means an annual total of $742,350 (.0505 x 14,700,000) in real estate taxes to the two municipal collectors. Total: $937,350 per year that the city might not have obtained without the influence of the university on the economy. In some ways this is a conservative statement -- the area could also have declined absolutely in the same period. However, attribution of these offsets to the presence of the University must be recognized as a matter of opinion, not fact.

Allegheny County would also be affected by this imputed growth-effect of the University. At 16.75 mills on both land and buildings, the $17.2 million increase in assessment since 1950 represents a possible net gain to the county of $288,100 per year (0.01675 x 17,200,000).

The total possible net increase in tax revenue, then, from the immediately surrounding ward of the University, is $1.2 million per year. This sum is between 18 per cent and 35 per cent of the estimated municipal revenue foregone because of the tax-exempt status of University property. It does not allow for the economic effects of expenditures by the University, staff and students on other aspects of the local economy -- which will be dealt with later in this report.

H. THE UNIVERSITY PAID $220 THOUSAND IN CITY AND COUNTY REAL ESTATE TAXES, $75 THOUSAND TO THE STATE

In the year ended June 30, 1971, the University of Pittsburgh paid the city $170,004 in real estate taxes on those of its properties judged to be taxable as revenue-producing activities. Similarly, the University paid Allegheny County $49,505 on the same assessments.

This observation is not included in our report as another offset to tax exemptions, but merely to record that not all of the University's property is exempt from local taxation, e.g., the book store and rental properties.

In addition, the University paid the Commonwealth a sum of $74,549 in sales taxes on purchases related to non-instructional activities. Most University purchases are exempt from this state tax, however. Assuming that five-sixths of the University's estimated $30 million in purchases were taxed at 6 per cent, the result would be $1.5 million a year -- i.e. that is what a similar commercial venture might have to pay, depending on tax rules and exemptions.

J. THE UNIVERSITY COLLECTED $53,000 IN AMUSEMENT TAXES FOR THE CITY FROM PEOPLE WHO CAME TO PITT FUNCTIONS

In the year ended June 30, 1970, the University of Pittsburgh collected $52,689 in amusement taxes on behalf of the city, from people who bought tickets for University functions, such as football games, student affairs with admission, Pitt Theater, etc.

The amusement tax collections can be considered an offset to the University's tax exemptions, in that without the University these sums would not have been collected for the city, and for Washington.

K. THE UNIVERSITY PROVIDES CERTAIN MUNICIPAL-TYPE SERVICES, WORTH ABOUT $3 MILLION A YEAR

The main municipal-type services provided by the University -- and therefore saving the city an equivalent amount of money -- center on the many aspects of campus security and on health services.

The University's definition of security services is broad. It covers much more than the traditional watchman function, although this still accounts for about 20 per cent of the annual budget now approaching a million dollars a year.

The University of Pittsburgh's philosophy of security administration is shaped by the nature of such services in an urban university setting. A new judicial system largely administered by students has been established this fall. This in turn means still more changes in the evolving relationship between the city police and other local forces, and the University security force of 119 members (87 in uniform).

The policy of the University's security force is to work in full co-operation with the local police, notably the staff of No. 4 station in Oakland. Campus security men patrol the streets of Oakland in the university area. They respond to the needs of citizens generally, not simply in cases involving students. An estimated one case in five, we are told, involves non-students. The campus force carries out investigations of thefts, etc., on campus. It operates six motor vehicles that are combined probes and emergency vehicles for first aid.

Campus security officers have a dual role. Like members of the city force, they derive their authority from the Court of Common Pleas. In our view, about 50 of the 87 members of the campus security service are in effect replacing police officers who would otherwise have to be hired as additional staff at No. 4 station in Oakland. Considering the direct and indirect costs of this alternative, one can conclude that the city is being saved at least $750,000 a year.

One or two other municipal-type functions save the city taxpayers money: snow and garbage removal. The University clears snow on University Drive at a varying cost each year. Refuse removal from the campus costs $50,000 a year.

The University also subsidizes the Falk Clinic ($400,000 a year), an outlay that might in other circumstances be made by the municipality or other outside agency. An estimated $1 million of the Pitt medical school budget goes for the care of indigent patients -- which in other cities might be paid for by government agencies. A further estimated 3 per cent of the $30 million in research funds, or about $1 million a year, is for training programs and studies which the city or county would be called on to provide if they were not available from the University. The University's dental clinic makes an additional contribution.

Taking all these sums and indirect contributions together, one can conclude that they would represent at least $3 million in the past year.

L. SUMMARY: UNIVERSITY CONTRIBUTIONS OFFSET SHADOW TAXES

Here is the summary of the three estimates of taxes that would have to be paid by a profit-making body occupying the present Pitt campus. Economic offsets are also indicated, as previously calculated:

Shadow Tax Based On	($ thousands as of 1970) City	County	Total
The acreage of the campus	$285	$70	$355
OR			
A revaluation of the campus	5,000	1,200	6,200
OR			
Existing official assessments	2,500	700	3,200
Economic offsets to exemptions			
Growth of Oakland assessment	937	267	1,204
Amusement taxes	53	-	53
Security services by Pitt	750	(?)	750
Health and other services	2,250	(?)	2,250
	$4,257	$267	$4,257

From the above table, one can conclude that the University pays its own way in the community in terms of direct economic effects. These do not, of course, include any of the indirect contributions in the taxes or community services or the expenditures and growth effects of faculty, staff and students.

Snacks And Students: The Tuck Shop

VIII

IMPACT OF UNIVERSITY PURCHASES

A. INTRODUCTION: PURCHASES ARE LARGE BUT HARD TO TRACE

Out of its 70-71 operating expenditures of $123.7 million, the University spent 60 per cent of this sum, or $73.7 million, on salaries, wages, and non-wage elements of compensation for faculty and staff. This means that the balance, almost exactly $50 million, was spent on other things.

From our sample surveys of faculty and staff spending patterns, we can make a reasonably reliable estimate of where and on what the employees of the University of Pittsburgh spent their money last year. Unfortunately, the records of the University and its information system generally are not designed to yield this kind of management information on the 40 per cent of the University's budget that is spent on objects other than its own staff. A detailed review of the situation also convinced us that sampling the universe of transactions was, if not impossible, at least beyond the resources of this project. This means that in what follows we have incorporated a large amount of subjective analysis. We caution the reader that we cannot back up our conclusions with incontrovertible facts.

B. LOCAL PURCHASES ARE AT LEAST $20 MILLION PER YEAR

As summarized in the accompanying table on University of Pittsburgh expenditures in the year ended June 30, 1971, the outlays that can be reasonably well identified account for about 25 per cent of the total. In other words, 60 per cent of the money goes for salaries and related benefits, and another 15 per cent for financial charges, debt servicing, net support of research costs of scholars and programs -- leaving 25 per cent for a series of expenditure objects. This 25 per cent amounts to $30 million per year.

Although one cannot make a definitive allocation of the geographical distribution of this $30 million, in our opinion about two-thirds of it, or $20 million per year, is spent in the local area -- primarily in the City of Pittsburgh.

UNIVERSITY OF PITTSBURGH EXPENDITURES
for the year ended June 30, 1971
($ millions)

	Amount	% Total
Salaries and benefits	$73.7	59.7
Purchases		
Equipment	3.9	3.1
Supplies	6.3	5.0
Printing	1.0	0.8
Maintenance, alterations, moving	7.8	6.4
Travel	2.4	1.9
Telephone and communications	1.5	1.2
Libraries (acquisitions only)	1.1	0.9
Bookstore	2.9	2.3
Utilities	2.2	1.8
Insurance	0.6	0.5
Food Service	1.9	1.5
Sub-total purchases	31.6	25.4
Financial charges, debt servicing, support of scholars and programs, miscellaneous expenses	18.4	14.9
Total (excluding $4m. transfers =	$123.7	100.0%

DISTRIBUTION OF APRIL, 1971 PAYMENT VOUCHERS

Area	% Total Value	% Vendors	$ per Vendor
City of Pittsburgh	47.3	24.2	$1,248
Other Allegheny County	2.1	2.4	570
Other Pennsylvania	5.8	8.6	434
Out of state	44.8	64.8	441

Note: Except for the incidence of unusually large individual expenditures on special projects or items such as computer hardware, April is considered to be a representative month for the fiscal year.

The money, it should be noted, goes for items such as equipment, supplies, printing, telephone service, utilities, some books and films, insurance, food services. A portion of the remaining 15 per cent ($18 million) -- the financial charges and miscellaneous outlays for support of research, etc. -- is also spent locally. We deal with the financial transactions in Chapter XIII, below.

The minimum estimate of $20 million per year of direct local purchases also excludes any multiplier effects of this activity. That is, the sum cited is a first round impact and does not take into account what happens to that money in the hands of local recipients. In stimulation of local business, the final effect is probably around $40 million a year (see Chapter XIV).

The foregoing analysis is based for the most part on interviews with purchasing agents and accounting personnel at the University of Pittsburgh. To analyze the geographical pattern of payments -- which may not match that of the purchases in the sense of location of the actual procurement -- we studied one month's payables vouchers in detail. This totalled $1.5 million out of $19.6 million in fiscal 1970-71 that was paid through the voucher procedures; in addition to this total, the university also buys utilities, food services, construction work for maintenance, etc. that bring the total of such procurement to the estimated $30 million per year already mentioned above.

C. THE LOCAL COMPONENT OF PURCHASES VARIES WIDELY AS BETWEEN THE OBJECTS OF EXPENDITURE

The following rules have been used to allocate the local component of university purchasing:

- 50 per cent of the equipment (and its operation) and supplies.
- 25 per cent of the library books, films, etc., including book center purchases.
- 10 per cent of the travel expenses.
- All expenditures on printing, maintenance, alterations and moving, utilities, insurance, and food services.

This allocation is undoubtedly not accurate in a strictly accounting sense; but we feel that on balance it is reasonable in overall result.

Browsing In The Book Center

IX

UNIVERSITY-OWNED BUSINESSES THAT COMPETE LOCALLY

A. THE PRE-EMPTIVE IMPACT OF UNIVERSITY-OWNED BUSINESSES DEPENDS ON HOW THEY ARE VIEWED

The Caffrey-Isaacs report (p.18) observes that "colleges are in competition with all other economic enterprises for the dollars of their constituents". This is true. One need think only of the major items of university revenue. Student fees could be spent on other things. State funds could go for other worthy programs. So could the funds of capital donors, philanthropists and alumni generally.

In reflecting on the implications of college-owned business at the University of Pittsburgh, we have decided to ignore them, on one or another of two grounds: either they are simply investment properties that might be owned by anyone, or they are enterprises that employ largely local people and resources. The main variation in normal business tradition is that in this case the profits (or lower prices) accrue to the members of the university community rather than the business community. This is a small margin in an impact study like this one.

As an example, let's take the student book store in Oakland. It is a finely laid out, well-stocked establishment that compares very favorably with local businesses, in our view. If it did not exist, it would have to be invented and set up near its present on-campus location. It occupies property that is assessed. It pays municipal real estate taxes. It hires people, purchases utilities, buys books and other stationery items (but leaves souvenirs and clothing to a privately owned store down the street). About the only thing it does not do is return a profit to some local businessman. The store operates on a break-even basis by policy.

Under these circumstances, our view is that only a negligible amount of book store revenue ought to be considered as an offset to University expenditures. In this case, we chose to ignore it, on the grounds that the legal status was not economically significant in the local situation.

University auxiliary activities do not all fall in reasonably clear-cut patterns. Complicated issues arise about the efficiency of resource utilization as compared with some alternative institutional arrangement. On the book center, for example, are its prices higher than they otherwise would be? What happens to any net revenues? We do not have either the data or the terms of reference to conduct an impact analysis on this level, and hence are dealing with the University's revenue-producing activities on a "cash flow" basis. In our view, however, the values concerned are of relatively minor economic significance in any event.

B. THE UNIVERSITY HAS SEVERAL REVENUE-PRODUCING ACTIVITIES

Officially, the University considers itself to have a number of "auxiliary activities". These are listed below along with a couple of others that fit the genre but are not formally included in the category:

Auxiliary Activities Revenue	1970-71 Revenue ($ millions)
Dormitories and food services	$6.90
Student stores (90 per cent Oakland)	3.70
Sports and related activities	0.96
Parking lots and garages	0.25
Miscellaneous rental properties, e.g. for nurses, grad students, etc.	0.06
(See Revenue Statement in Chapter IV)	$11.87

Also,

Motor pool of cars and trucks for use by security and other university departments	(see below)
Print shop	$0.76

In an earlier section of this report, we commented on the value of food services procured from outside suppliers, as opposed to the provision of its own food for residence students (in the dorms). That figure was $1.9 million last year. The balance of $6.9 million in revenue, or $5 million, represents residence fees and related monies. We feel that this is part of the university operation and should not realistically be considered a "business" -- especially since the provisioning is done through outside contract.

We have already talked about the student stores; the parking lots and miscellaneous rental properties do not appear to us to be sufficiently important to require comment. In the case of the parking facilities, the University is using its own properties and will no doubt have to turn to commercial operators if and when it runs out of capacity. The miscellaneous rental properties are just too small to warrant discussion as part of a $125 million operation.

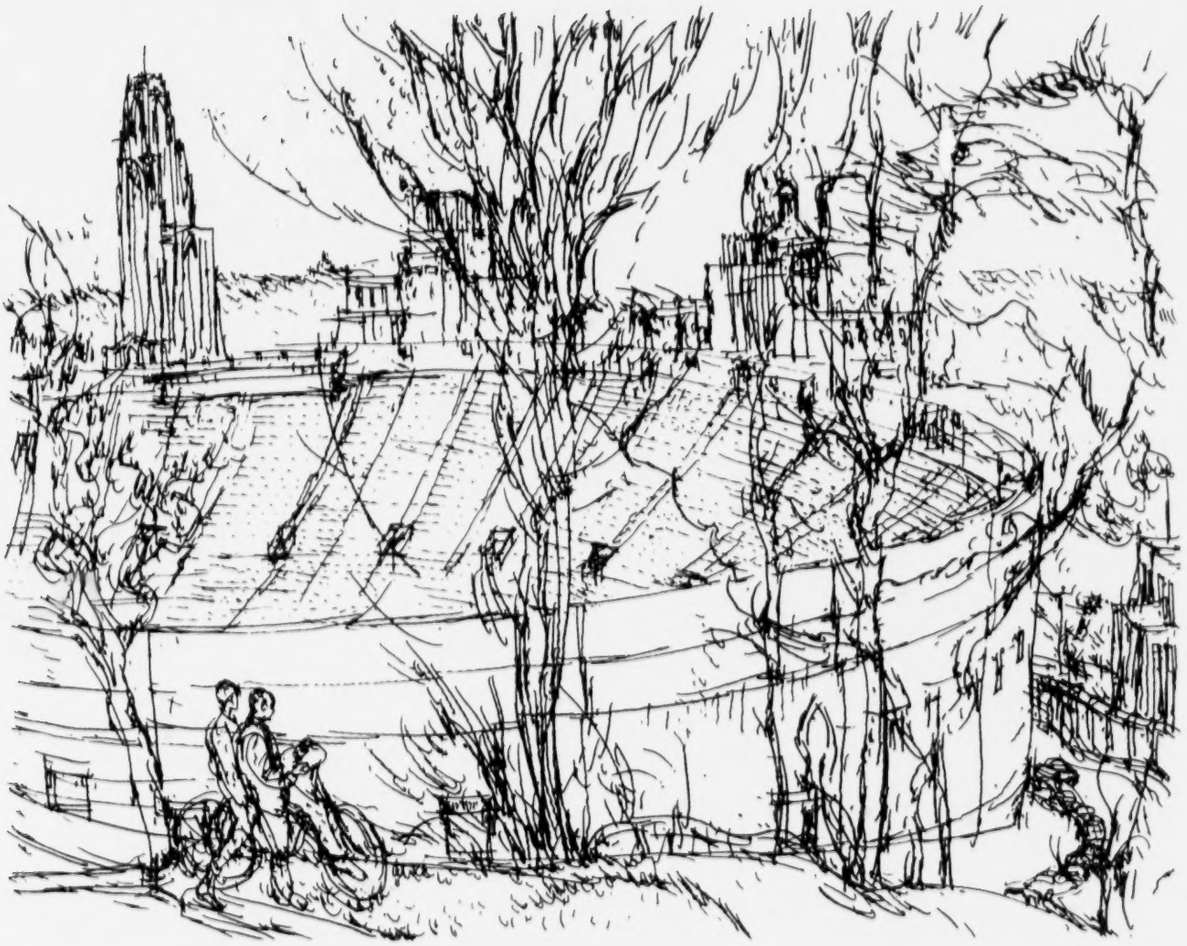
The motor pool is a more complex case. In this activity, the University buys some 36 cars and a few small trucks, each year. It does not pay taxes on these purchases. Under its rental rules for internal users, the pool makes the cars available to university departments on a mileage basis, and in other cases rents them by the month.

Among the users of the motor pool is campus security. Other departments have cars suitable to their particular needs -- mostly standard sedans. From time to time, the pool rents cars from outside agencies to meet peak load requirements, or during a period when it may have sold certain of its vehicles and is awaiting delivery of replacements.

It is hard to put an "opportunity revenue" on the motor pool. For one thing, not all its costs are allocated. It does not have to pay interest on its capital. No management salaries are charged to its budget. Not all its accommodation costs are charged to its operations. It is impossible to compute the equivalent commercial leasing revenue that would have to be paid to replace the University's vehicles with a fleet from a private leasing agency. Our point is, however, that except for the capital costs and the return on investment, the sums are not really significant in the total picture of University operations.

The print shop does three-quarters of a million dollars worth of "business" for the University each year. Of this, the bulk of the funds is spent locally -- either on supplies such as paper and ink and equipment, or on job-shop printing operations analogous to those purchased by the University's public relations and publicity group directly on their own account. The print shop does not do lithographic work. It deals with the production of stationery, forms, reports, surveys, basic university documents, orientation brochures, telephone books.

We have not investigated the efficiency of the print shop. It has good equipment and appears to do acceptable work. Probably it is as efficient as most outside operators when one considers the advantages it offers in flexibility and availability. On balance, there seems to be no reason to attribute to it negative income effects in the community.



Stadium In Spring

X

HOW PITT EMPLOYEES SPEND THEIR INCOMES

A. MORE THAN 4,700 PITT FACULTY AND STAFF SPEND 75 PER CENT OF THEIR $48 MILLION DISPOSABLE INCOME IN PITTSBURGH AND THE COUNTY EACH YEAR

As might be expected, the sampling[1] of Pitt faculty and staff revealed that about half of them live in the city and all but 4 per cent of the rest within Allegheny County. What with travelling and responsibilities outside the immediate area, the members of the University send an estimated 8 per cent of their personal expenditures into parts of the state outside Allegheny County, and a further 17 per cent out of state -- e.g. for travel and taxes. The balance, 75 per cent, is spent close to home.

The aggregate income of the faculty and staff, as cited in a previous chapter of this report, was $73.7 million in the year ended June 30, 1971. The difference between this figure and the $48 million quoted in the heading above consists of deduction of hospital salaries processed through Pitt and subsequently repaid by the hospitals, employee contributions to annuities, taxes, deducted earnings of employees on regional campuses, etc.

B. PITT EMPLOYEES REPRESENT A $30 MILLION ANNUAL MARKET FOR CONSUMER DURABLES AND NON-DURABLES

Of the gross income (before taxes) of University employees, approximately $15 million goes for taxes, savings, charities. Another $15 million is spent on housing ($12 million) and travel ($3 million). The balance, about half the gross, is spent -- mostly in Allegheny County -- on the

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[1] The sample consisted of 973 replies to a questionnaire that was sent to most members of the faculty and staff. About 1500 replies were received, but many of these were not complete and so were not tabulated. The response rate is about 32 per cent and the usable replies about 20 per cent, adequate for our purposes. More serious is the fact that higher-income earners tended to reply: 60 per cent of the respondents had incomes over $10,000, whereas in the university only 36 per cent of employees earn more than this sum. No adjustment can be made readily for this. The survey was anonymous and confidential, not permitting follow-up of non-respondents. Also interesting is that one-third of the respondents lived in households with more than one income-earner.

purchase of consumer goods and services. Of these, about four-fifths are food, clothing, personal services, medical care, insurance, and other non-durables. That amounts to some $25 million per year, with another $5 million for durables on top of that. These outlays are two-thirds in the city, one-third in the county, with very little outside the metropolitan area.

C. PURCHASES OF PITT EMPLOYEES REPRESENT ONE OUT OF EVERY HUNDRED DOLLARS IN ALLEGHENY COUNTY RETAIL SALES

The $30 million spent each year currently by Pitt employees in local retail purchases of durables and non-durables is approximately 1 per cent of $2.8 billion in total retail sales in 1970, for Allegheny County.[1] Although about two-thirds of the Pitt employees purchases were in Pittsburgh, and another one-third in the county, the general pattern of retail sales is much less heavily concentrated in the city. Out of the $2.8 billion total, 45 per cent is in the city and 55 per cent in the rest of the county.

D. EMPLOYEES OF THE UNIVERSITY PAY OVER $4.3 MILLION IN LOCAL TAXES, SOME DEDUCTED BY THE UNIVERSITY

To the various local jurisdictions, employees of the University pay one or more of a number of taxes: real estate tax if they own their homes, including a school levy on this basis, 1/2 per cent or 1 per cent income tax and school income tax depending on where they live, and a $10 occupation tax if they work in the City of Pittsburgh.

It is not easy to sort out the payments for these various taxes. People have difficulty recalling them for questionnaires; and not all are deducted for them by their employers (with resulting accurate records). Moreover, our faculty and staff surveys concentrated on full-time employees of the university, whereas Pitt employs many part-time people (23 per cent of total).

The accompanying table on estimated 1970 taxes paid by employees of the University is thus a mixed set of data: part of it refers to the monies collected by the University from all its employees and forwarded to tax authorities. Other elements in the table are based on inferential analysis of the survey we conducted of how Pitt employees spend their money. Notes to the table differen-

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[1] See Sales Management, 1971 Survey of Buying Power Vol. 107, No. 2, July 1971, pp. D114-117.

LOCAL 1970 TAXES PAID BY PITT EMPLOYEES

($ thousands)

Tax or Other Levy	City of Pittsburgh	Towns/ County	Others/ State	Total
State sales tax (est.)[1]	-	-	$595.6	$595.6
Wage tax and income tax	$722.1	$300.0[2]	232.5[3]	1254.6
Real estate tax[4]	1028.7	955.9	93.5	2078.1
Water rates	92.8	86.3	8.4	187.5
Sewerage and sanitary authority	5.0	4.6	0.4	10.0
Occupation tax[5]	118.6	11.6	-	130.2
Total[6]	$1967.2	$1358.4	$930.4	$4255.0

Notes

1. Sales Tax based on incomes and official IRS formula.

2. Estimated from the payments to the city, in proportion to place of residence indicated in the sample survey, and 1/2 per cent tax rate instead of 1 per cent; an approximation.

3. This amount was collected by the University from its employees in 1970, for state income tax. It includes part-time people and hospital employees in some instances. The figure covers only part of the year, however, since the tax was not instituted by the Commonwealth for the full fiscal year. In future years, Pitt employee contributions to this state levy will begin at $1.9 million per year and grow with increasing levels of income.

4. Excludes $220,000 in real estate taxes paid by the University on investment properties which it holds. Also excludes taxes paid by landlords whose tenants are University employees. Estimate is based on conclusion from sample survey, adjusted for distortion of income distribution of the sample, that about 45 per cent of the 5500 members of the University faculty and staff own their own homes.

5. Official figures of the University. Allocates all but Pittsburgh sums to other towns in Allegheny County.

6. Does not include $600,000 in additional taxes and levies at the local level indicated by respondents to the faculty/staff survey, since it may include data already reported by the University.

tiate the sums concerned. It should therefore be remembered that we are talking about approximations in most cases. The sums could in certain instances be 20 per cent off the "correct" but unknown figures. However, we believe that in general the data provide a reasonably reliable indication of the flow of tax monies to local authorities from the faculty and staff of the University:

- In wage taxes, real estate taxes, occupation tax and charges for water and sanitary facilities, the City of Pittsburgh collected nearly $2 million from faculty and staff households. This figure is an understatement because it excludes the proportion of part-time employees' earnings devoted to these levies with the exception of the wage and occupation taxes. On the other hand, it includes data for wage and occupation taxes for employees of the hospitals affiliated with the University's medical school (about 17 per cent of the total). On balance, the figure is probably reasonably accurate.

- Other jurisdictions in Allegheny County outside the city received last year $1.2 million in the various levies -- of which the real estate tax is by far the most important.

- The Commonwealth itself, through the state income tax, and centers outside Allegheny County, collected an estimated $0.3 million in taxes in 1970 from Pitt faculty and staff. The largest item here is of course the state income tax, at $233 thousand. This latter gives the collections for part-time as well as full-time staff (for part of the year). This year the total will be $1.9 million in state income tax, and more in future years. The $233 thousand reflected constitutional problems with state income taxation. The initial tax law was declared ultra vires of the Commonwealth. Hence it was collected for only a portion of the year.

- The total contributions to tax levies of local and state governments thus amount to $4.3 million from the faculty and staff of the University.

. A further sum tentatively estimated to be $0.6 million in additional levies was indicated in our special survey. However, these cannot be identified and have not been attributed to any specific level of government.

E. FACULTY AND STAFF OF THE UNIVERSITY HAVE AN ESTIMATED 6600 CHILDREN, 60 PER CENT OF THEM ATTENDING SCHOOL IN THE CITY AND COUNTY PUBLIC SCHOOLS

Although the results of the sample survey are hard to interpret unequivocally, 60 per cent of the members surveyed said they have children, and an average of between 2 and 3 each. Of the children reported as attending school, the sample indicated that three out of five attended school in the city and county public schools. A general indication was derived, too, from the analysis, that a considerable proportion are not now attending classes, perhaps as many as half of the children of Pitt faculty and staff.

The taxes paid by the members of the University help support their children in local schools, to the same extent as do other members of the community. Of course, the taxes of non-parents, or those whose children are grown up, contribute to the education of the others.[1]

Some of the children of the faculty and staff are attending private schools in the area; a few attend church-sponsored institutions. These numbers are small compared to those of public school attendance. In general, almost all go to such schools in the local area, either in the city or within Allegheny County.

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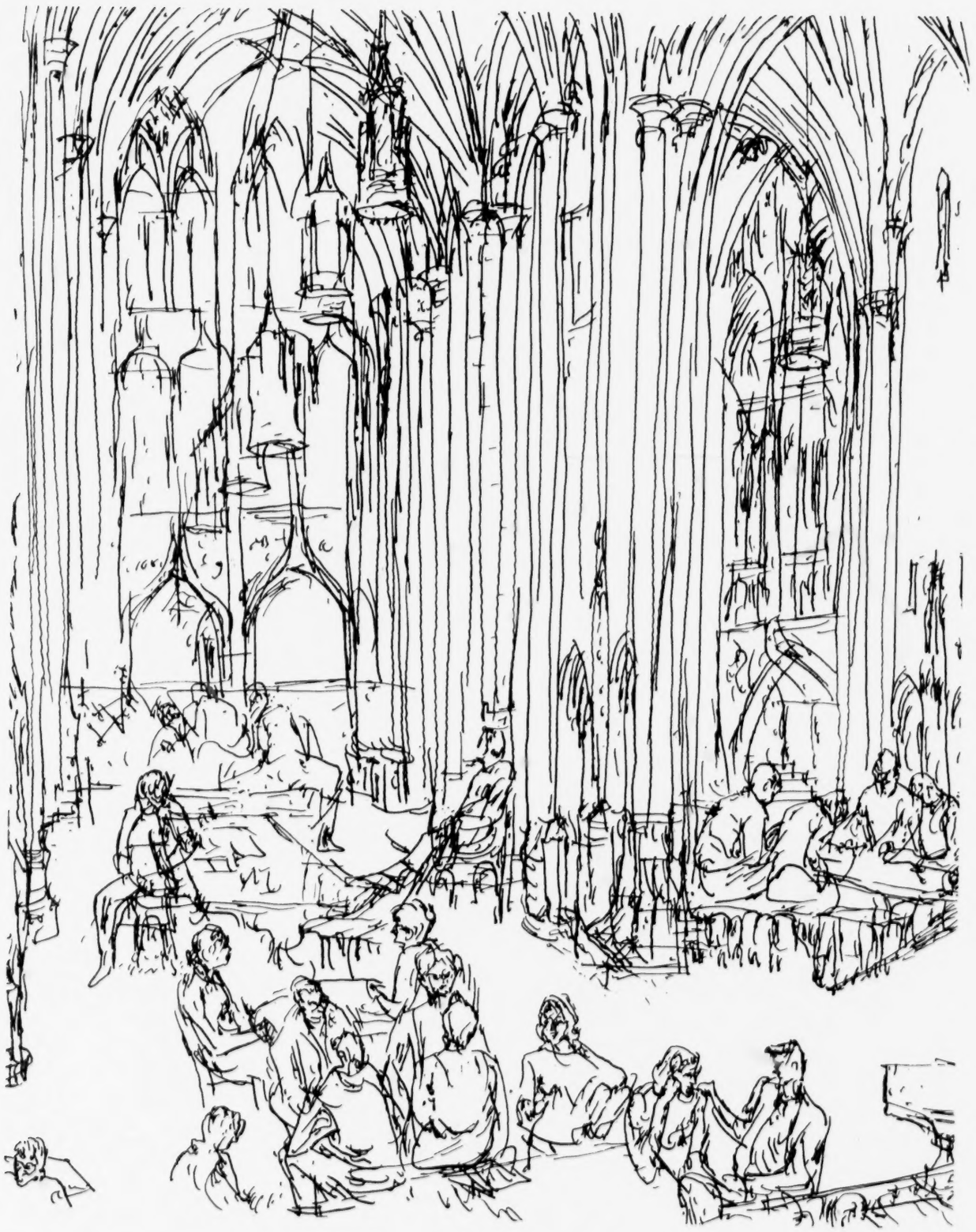
[1] The 1971 Budget of the Pittsburgh Board of Education shows that real estate tax and personal property tax provided 43 per cent of the 1970 revenue to the board. Of the balance, state and federal appropriations provided an almost equal amount. The bulk of the balance was derived from the earned income tax. (See 1971 Budget, p.75) In the city itself, last year's school attendance was about 70,000. It is not likely that more than 1200 of these pupils were children of Pitt faculty and staff. The income levels of survey respondents suggest, too, that they probably own more property and pay more taxes than the average citizen in the local area.

When it comes to attending university, it would appear that, as usual, students like to get away from home. Colleges and universities out of the local area are favored by many sons and daughters of the faculty and staff, it seems. Proportionately more attend such institutions outside the county and the state than attend the University of Pittsburgh. This, it should be said, is a partially subjective evaluation of the data -- which do not lend themselves to a refined analysis of the location of schools attended by children of faculty and staff.



Commons Room Studies

XI

THE ECONOMIC IMPACT OF PITT STUDENT SPENDING

A. STUDENTS ARE A MAJOR FACTOR IN THE UNIVERSITY'S IMPACT

Anyone who has spent days and evenings in Oakland will understand very well that the students of the University of Pittsburgh are a potent economic force in this local community. Students are everywhere, in food shops, bars, flower store, theaters, hardware stores, clothing stores, shoe repair shops, the state liquor store, the local motel, and driving up and down the congested midtown streets in every conceivable variety of motor vehicle. Oakland comes alive in the fall when the students return. There simply would be no downtown Oakland business district if it were not for the students of the University. Unlike the faculty, most of them live within walking distance of the campus, either on campus in dorms or in nearby off-campus housing units. They throng the sidewalks and shops of the campus area in Pittsburgh, day and night, and aside from their economic significance provide an inspiring and hopeful picture of the younger generation in motion.

The University of Pittsburgh is famous for a number of its programs, notably its health and social sciences and philosophy at the graduate level. In undergraduate terms, the University is very much a university for the greater Pittsburgh area -- most of its students come from homes not very far from the origin of the Ohio River in mid-city. Recent studies of the family backgrounds of the student body indicate that Pitt is a university for the mass of the people of the community who wish to pursue their post-secondary education at the baccalaureate level. It is more significant in this respect, in fact, than many other American universities; three out of five of its undergraduates come from homes where incomes are below the median (middle) figure for publicly supported colleges and universities.[1] Yet, more than 90 per cent of those it admits come from the upper two-fifths of their high school graduating class, as measured by scholastic achievement.

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[1] Diane Palmer, Report on Student Socio-economic Status, Fall 1970. Undergraduate students. Prepared by the Office of Institutional Research, University of Pittsburgh, 1971.

The human capital effect of the University of Pittsburgh is enormous. Because of the leverage which Pitt exerts on the fortunes of its constituents, their destinies are much more important in the life of the community than the mundane arithmetic of student budgets from term to term. But even in the narrow economic sense, the students of the university are a major factor in the university's business impact on its local economy.

B. MOST PITT STUDENTS COME FROM WITHIN THE STATE AND LIVE NEAR THE OAKLAND CAMPUS WHILE AT SCHOOL

In 1970-71, an estimated 88 per cent of the students at the University of Pittsburgh came from Pennsylvania homes, more than half of them from the greater Pittsburgh area. Some of the students lived in dormitories on campus, others in their own off-campus quarters. Still others commuted back and forth from homes in the greater Pittsburgh area:[1]

Living Arrangements	Number of Students	% Total
Dormitories on campus	3900	23.2
Off-campus housing	7800	46.4
Commute from home	5100	30.4
	16800	100.0

The above estimates of full time students at the Oakland campus in 1970 exclude 11,000 part-time students and 3,800 full-time and part-time students at the regional campuses outside the city. The University's total student head count last year was approximately 30,900. Most part-time General Studies students are already living and working in Pittsburgh, do not spend significant extra amounts of money because of their attendance at school. General Studies students do have a significant economic impact on the Oakland area, within the city. They bring substantial but unknown amounts of money to the neighborhood of the campus, while they attend classes.

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[1] Like other student spending estimates, this is based on a survey of residence students, off-campus students, and commuters. Usable responses from the surveys totalled 1027. We are indebted to the University's Office of Measurement and Evaluation, and especially John Drugo, for assistance in processing the survey results through the University's computer.

C. IN ADDITION TO RESIDENCE FEES FOR ROOM AND MEALS, PITT STUDENTS SPEND $16 MILLION A YEAR -- 75 PER CENT OF IT IN THE CITY OF PITTSBURGH AND ALL BUT 10 PER CENT WITHIN PENNSYLVANIA

Aside from the $6 million a year that residence students on the Oakland campus pay for their room and board in dorms, they and their fellow students spend $16 million a year while attending university (almost $1,000 each, for every two terms -- and disregarding the summer students).

All but 10 per cent of this $16 million a year in student personal expenditures on goods and services is spent within the state. As one might expect intuitively, 75 per cent of it is spent in the greater Pittsburgh area. For each dollar spent, at least 50¢ is spent within the City of Pittsburgh itself. The overwhelming bulk of this is spent in the Oakland district around the central campus: $500 per 2-term year for each of the 16,800 students enrolled on a full-time basis. It is no wonder that Oakland merchants are well aware of the importance of the student market.

D. PITT STUDENT SPENDING PATTERNS ARE MUCH LIKE THOSE IN OTHER PLACES: AT LEAST $1,000 PER YEAR IN ADDITION TO TUITION

Studies of the current American scene suggest that a student spends an average of about $160 per month to live away from home, aside from his tuition.[1] Some of course spend more than this, and a surprisingly large number less. By the standards of the adult population, this is not a luxury level of living.

In the University of Pittsburgh, the corresponding figure would be a little below the $160 per month. With almost 17,000 students on the Oakland campus, this still represents a significant amount of local purchasing power as already noted.

E. EXPENDITURES BY STUDENTS ON NON-DURABLES DOMINATE THE MARKET EFFECT

Out of a total of approximately $1,000 a year (2 terms), on items other than residence fees and tuition, an estimated $800 is spent on things other than hard goods.

[1] The Pitt student spending surveys we conducted tend to confirm the previously indicated statistics. See, for example, data and references cited in John Caffrey and Herbert Isaacs, Estimating the Impact of a College or University on the Local Economy, pp. 50-51.

This figure includes transportation home for students living outside the immediate area.

This means that out of the $16 million calculated to be spent each year by Pitt students, $13 million is spent on travel and non-durable goods and services.

F. THE STUDENT MARKET FOR DURABLE GOODS IS $1.6 MILLION PER YEAR, ALMOST ALL IN PITTSBURGH

Students at the University of Pittsburgh spend an estimated $1.6 million a year on durable goods such as radios, TV, stereo sets, appliances of other kinds. The student spending surveys show, as might be expected, that students in their own off-campus housing quarters spend about twice as much on such items as do their fellows in dorms or at home.

It is not possible to identify precisely where these purchases are made, but except for a small proportion made in the students' home towns, the bulk appear to be purchased in the immediate campus area and in downtown Pittsburgh stores.

G. STUDENTS SPEND $1.6 MILLION A YEAR TRAVELLING OUTSIDE ALLEGHENY COUNTY

As tabulated from the student spending surveys, Pitt students spend about the same amount on travel and durable goods: about 10 per cent of the funds on each. This pays for going to and from home, and for vacation trips.

Rather interesting and not expected is a finding that commuters who live at home and travel back and forth to school spend as much or more on travel as do the students who come from farther afield to live in the dorms or in their own off-campus living quarters. The students living in the dorms spend less than the other two groups. Actually, the same situation obtains on non-durables as well: the students who live at home spend almost as much on such goods and services as do their friends living in nearby apartments and rooming houses. Presumably, the economies of living at home while attending school do not lead to greater overall economy but rather to a diversion of expenditure patterns from basic room and shelter to complementary items of a more discretionary nature.

H. STUDENT GOVERNMENT ORGANIZATIONS SPEND ANOTHER $200,000 PER YEAR OF STUDENT FUNDS, MOSTLY IN PITTSBURGH

Organizations representing undergrads and graduate students spend a total of $200,000 a year in the course of carrying out the programs of these student organizations.

During 1970-71, the Student Government representing the full-time Pitt student body allocated $125,087 to various organizations and to its own operations, 49 activities in all. According to officers of the Student Government, all but 30 per cent of this money was spent locally, and most of it in Pittsburgh. Exceptions were for out-of-state travel, concerts, visiting speakers. The bulk of the money was spent on publication costs and personal services.

The School of General Studies Cabinet represents the part-time students who study at Pitt in an effort to complete or continue their education while still working. This group has an administration budget of $70,000 a year, predominantly local in its distribution: office supplies, publication costs, prizes, entertainment, and grants to other student bodies.

Seminar In Chinese Classroom

XII

THE ECONOMIC EFFECT OF VISITORS TO THE CAMPUS

A. MORE THAN 90,000 OUT-OF-TOWN VISITORS COME TO PITT EACH YEAR AND SPEND $3.1 MILLION

Based on diligent efforts by members of the University-Urban Interface Program staff to track down campus visitors, and aided by research done at other universities,[1] we have estimated that 90,000 people come from out of town each year to visit the campus. They spend about $3.1 million doing so.

It goes without saying that counting and measuring the spending patterns of visitors is a difficult task. The estimates in this section are certainly not precise. In our view they are within about 25 per cent, one way or the other, of the true figure. The total could be as low as $2.3 million or as high as $3.9 million. Because not all conceivable kinds of visitors can be identified and their spending estimated, the $3.1 million is probably a little low. But here, as in other parts of this study, we have tried to be conservative.

The main visitor categories are game spectators, visiting parents, and other visitors who come for business and educational reasons (average stay is 1.25 days):

Visitor Category	Days	Expenditures ($,000)
Spectators of games (excl.parents)	66,750	$1,200
Parent parties (one or more)	23,000	1,350
Business & educational visitors	25,000	625
	114,750	$3,175

[1] Our analysis in this chapter has profited from William A. Strang, The University and the Local Economy, Wisconsin Economy Studies Number 4, Graduate School of Business, Madison, September, 1971, pp. 48-57. In addition to conducting local interviews and using local information sources, as we did, Professor Strang employed sample surveys of visitors' origins and spending patterns. His study is interesting and useful from a number of standpoints.

B. SPECTATORS SPEND $1.2 MILLION ATTENDING GAMES

According to available records, Pitt had 176,450 ticketholders last year for its games. Using both local investigations and the Wisconsin report referred to above, we have adjusted these figures for attendance by students, parents, university employees, and local residents. We have concluded that 38 per cent of the spectators, or 67,000, are from outside the city of Pittsburgh. Many, of course, came from the county; the rest were to a large extent from within Pennsylvania, but we have no data on this point.

Based on the average expenditure of $18 per visitor from the Wisconsin study, we calculated a total of $1.2 million for spectator expenditures in Pittsburgh. This is part of the over-all estimate of $3.1 million for all types of visitors, each year, at 1970-71 rates.

C. VISITING PARENTS SPEND $1.35 MILLION COMING TO SEE PITT STUDENTS

Based on University of Pittsburgh enrollment of 16,800 last year, we have calculated that about 12,000 parental parties visited students during the year, for an average of 2 visitor days each, approximately. This makes an over-all estimate of 23,000 visitor days by parents. The figure allows for the fact that many parents (the Wisconsin study estimated half of them) do not visit their children during the school term. It also allows for the fact that many come more than once. The Wisconsin figure is 4.68 visits per student for those visited. Expressed another way, the number of parental parties visiting students has been computed as 77 per cent of the full-time enrollment. This Pittsburgh number also takes into account the fact that many Pitt parents live close to the school and therefore are less likely to spend much money travelling or living near the campus in order to visit their children. The students in many cases can readily come home for such occasions, too.

Parents, it seems, are inclined to spend quite a bit of money when visiting their children at school -- not only on themselves but on gifts and entertainment for the younger generation. Looking again at the Wisconsin study, and thinking about the similarities and differences between Madison and Pittsburgh, we have adopted the Wisconsin average outlay of $115 per visitor party, or about $58 per visitor day. This figure seems a trifle high, but in fact includes a hidden component of extra people in the

visiting party. In many cases, more than two people make up this party, and this in turn has an effect on the particular unit of expenditure being used.

D. BUSINESS AND EDUCATIONAL VISITORS SPEND $625 THOUSAND A YEAR IN PITTSBURGH

Aside from game spectators and parents, approximately 18,000 other extended-stay visitors come to the campus each year and spend money in the area in doing so -- a total estimated at $625,000. The visitors stay varying periods from a few hours to a few days, and their visitor days have been worked out as follows:

Type of Visitor	Visitor Days
High School Students	300
To Pitt Theater & Glee Club	7,270
Conferences & Seminars (Minimum est.)	1,782
Visiting Teams, Athletes, etc.	2,350
Lecturers	300
Nationality Rooms and Heinz Chapel[1]	4,936
International Visitors	1,000
Educational Officials	60
Educational Subtotal	17,998
Placement Interviewers	650
Media Representatives	166
Servicemen (repairs, etc.)	909
Salesmen (Purch. Office & Depts.)	3,563
Candidates for Pitt Jobs	1,800
Business Subtotal	7,088
GRAND TOTAL	25,086

The University of Wisconsin study resulted in an overall assessment that these visitors stayed an average of 2.5 days each, and that they spent about $40 a day.

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[1] Expression in "visitor days" tends to obscure the many shorter-term visits made to the campus. Examples are 50,000 people per year to see the Nationality Rooms in the Cathedral of Learning, and the people who attend weddings in the nearby Heinz Chapel.

The Wisconsin figure of $40 a day seems too high for Pittsburgh. We have therefore adopted a lower number, $25 per day, to reflect the fairly high proportions of single-day visitors in the Pittsburgh situation. We used $5 a day for incidental visits of less than a day and $35 a day for overnight visitors. While the proportions are open to debate as matters of opinion, we feel that the $25 rate is reasonable for the purpose at hand. The whole calculation is probably too low on account of visitors missed altogether. On this point, we should record the omission of all the secondary visitors who come to Pittsburgh to deal with companies that serve the University and its population, of those who pack and transport goods to and from the university, of family members who sometimes accompany business visitors.

A total of 18,000 visitors at $25 for each of 25,000 visitor days is a total of $625,000 per year.

E. 40 PER CENT OF TOTAL EXPENDITURES GOES FOR FOOD AND LODGING

Based again on the Wisconsin study, which should be reasonably applicable in Pittsburgh on this matter, about 40¢ on every dollar of visitor expenditures goes for food and lodging, roughly half on each. The weights of these factors no doubt vary as between classes of visitors, with parents spending less and business visitors more.

Here is an estimate of the Pittsburgh allocation: (in thousands of dollars).

Type of Expenditures	Amount	%Total
Food and beverages	$603	19%
Accommodation	699	22
Clothing and other merchandise	857	27
Automobile service and transport	476	15
Services and amusements	476	15
Other	64	2
	$3,175	100%

From the above distribution, it would appear that the strictly local component of the expenditures is very high. Substantial outlays on consumer durables, that might be made in distant places are not relevant here. On the other hand, there is a high local-service content -- including a high proportion of food service which is not material.

Engineering Research

XIII

IMPACT ON THE FINANCIAL COMMUNITY

A. FACULTY, STAFF AND STUDENT BANK ACCOUNTS PROVIDE UP TO $10 MILLION IN CASH FOR LENDING TO BORROWERS

According to our sample surveys of the spending and banking patterms of Pitt employees and students, the combined total of bank accounts of faculty, staff and students (full-time) is as much as $10 million. This money is available for expanding the credit base of local business operations, not only in the city itself but also in surrounding areas or even farther afield.

B. ESTIMATING BANK BALANCES INVOLVES LARGE MARGINS OF ERROR: THE TOTAL COULD BE AS LOW AS $4 MILLION

In trying to find out what bank balances members of the University of Pittsburgh community made available to local borrowers through the banks, we tried to find out the average or typical balances. This is not easy to do. The question is not easy to answer. Students explained that they arrived with funds for the term, gradually drew down their balances during that time. They typically have larger active deposits than savings deposits. Staff and faculty are different. Their savings accounts are about twice as large as their checking accounts. The reasons for such differences are fairly obvious.

The main question-mark in our surveys lies in the characteristics of the respondents to the faculty/staff survey. The respondents were heavily weighted in the upper income ranges, so that the average income of respondents was about 30 per cent higher than that of the overall faculty and staff of the institution. For this reason, we are inclined to discount somewhat the reported figures on faculty and staff bank accounts. It is well known that most of the personal savings of the country are accumulated by people with higher-than-median incomes. The Pitt average income is close to the national median. On this account, we decided to discount the reported savings figure by 50 per cent ($4 million).

C. FACULTY/STAFF MEMBERS HAVE AVERAGE OF $350 IN CHECKING ACCOUNTS, AN AVERAGE OF $1000 IN SAVINGS ACCOUNTS

On the faculty and staff spending survey, 90 per cent of the respondents said they have checking accounts and 80 per cent savings accounts in local banks. The average checking account was $350, the average savings account $1000. It is these figures and incidences that we are inclined to discount. The computed total of accounts would equal $6.2 million. Our opinion is that the total is likely closer to $4 million. We could be quite wrong, of course, in that the survey did not reveal the presence of spectacularly large bank accounts; a few of these would bring the averages up quite sharply. The reader will have to apply his own judgment on this weighting problem.

D. RESIDENCE STUDENTS HAVE SMALLER ACCOUNTS ON THE AVERAGE ($160) THAN OFF-CAMPUS STUDENTS ($350)

The residence students responding to our survey (and it was a good response) indicated that only slightly more than half of their number typically have a local bank account. And those who do usually have relatively small amounts of money in it -- for reasons already noted in the preceding sections of this chapter. From the replies to the survey, indeed, it would seem that many students in the dorms are struggling through university with barely enough money to exist on, once their residence fees and tuition are paid. An average account of $160 is not very big for someone away from home for 3-1/2 months, each term.

The off-campus housing students are better financed, it would seem. More than 80 per cent of them reported a checking account, 66 per cent savings accounts. These ranged in average value from $290 for savings accounts to $390 for checking accounts. This is not surprising. The off-campus students are older on the average than the residence students, we believe, and are moreover financing their living on a day-to-day basis in contrast to the students in dorms who pay specified amounts for room and board once each term.

The results of this size distribution in accounts are reflected in the estimated aggregate accounts: just under $500,000 for the 3900 residence students and just over $4 million for the students living off-campus.

We did not count the bank accounts of the commuters. These were judged to be part of their traditional domestic situation, not a result of their attending university.

E. STUDENT ACCOUNTS TOTAL A SUM PROBABLY CLOSE TO THAT OF FACULTY AND STAFF: ABOUT $4 MILLION EACH, OR A TOTAL OF $8 MILLION AS A CONSERVATIVE ESTIMATE

If we discount the survey results as being biased by high-income respondents among university employees, then we reduce their total indicated bank accounts from $6.2 million to no more than $4 million, and add to this the $4 million indicated by the students -- for whom we have no reason to suspect any particular response bias.

F. MOST OF THE BANK ACCOUNTS ARE IN THE PITTSBURGH AREA: PROBABLY $6 MILLION IN ALL

We can assume with reasonable certainty that the vast majority of the bank accounts of Pitt employees are either in the immediate area of the campus near their place of work, or in the suburbs near their homes.

The student pattern is less obvious. It seems highly likely that most of the accounts of the residence students -- aside from a few inactive long-term savings accounts -- are in the immediate campus area. We asked the off-campus student respondents about this. Their responses indicated that 60 per cent of their checking accounts and 45 per cent of their savings accounts were in either the City of Pittsburgh or Allegheny County. Of the total, 10 per cent were in other parts of the Commonwealth.

In dollar terms, we believe that it is safe to conclude that two-thirds of the total checking and savings deposits of the faculty, staff and students are in Pittsburgh banks. This is a total of at least $5 million, and could be as much as $7.5 million. For purposes of impact analysis, we will select a figure of $6 million. We are sure this is not an exaggeration.

G. BANK ACCOUNTS OF UNIVERSITY EMPLOYEES AND STUDENTS SUPPORT UP TO $5.4 MILLION IN LOANS TO LOCAL ENTERPRISES

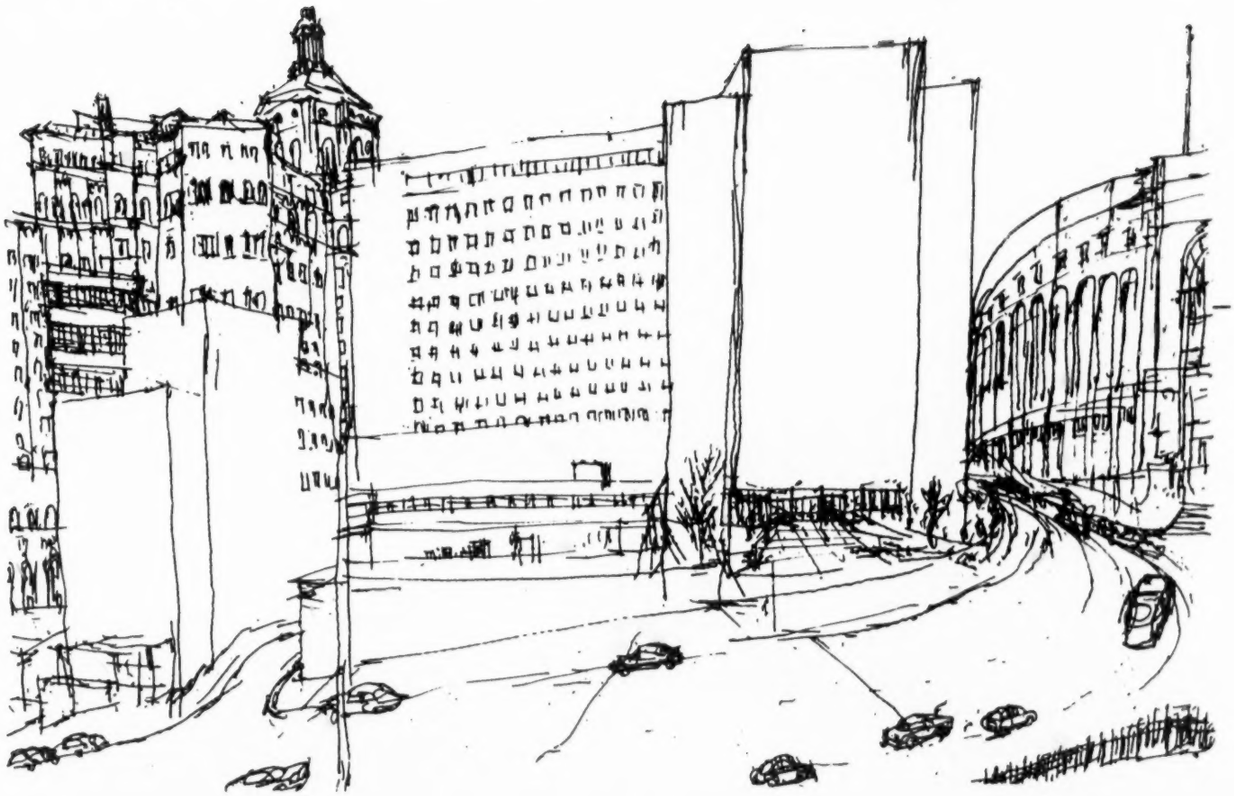
At reserve ratios of 17.5 per cent on demand deposits and 5 per cent on savings deposits, an aggregate deposit of $6 million in the proportions already indicated would permit an immediate expansion in the local credit base of $5.4 million. The figure does not, of course, indicate the multiplier effects of autonomous deposits in a linked banking system. If the dollar borrowed in the first round of transactions were in turn deposited in another bank, it, too, could go through the same procedure --

keeping the required reserve and lending the balance, given the opportunity to do so. In this way, deposits and loans are expanded in the aggregate in all reserve banking systems. Although we are not concerned here with the secondary, tertiary effects, etc., which may occur far outside the local area, the weighted average reserve ratio of 12 per cent would support an ultimate expansion of loans greater than the original deposit total. How much greater depends on whether or not the University in fact affects the national banking reserve system. The effect is probably pretty small. Effects beyond one-time changes should be ignored.

H. THE UNIVERSITY ITSELF HAS AN AVERAGE DEMAND DEPOSIT OF $2 MILLION, WHICH ADDS $1.65 MILLION TO IMMEDIATE CREDIT-BASE EXPANSION

During 1970-71, the University of Pittsburgh had an average demand deposit for operational purposes of about $2 million.

This sum would permit an immediate increase in loans through the depositary institutions, of $1,650,000, with the demand deposit reserve ratio of 17.5 per cent. If we add this sum to the $5.4 million in the preceding paragraph, the revised total is increased to $7.1 million.



Eastern Approach To Health Center

XIV

EXPENDITURES HAVE MULTIPLIER EFFECTS[1]

A. THE ULTIMATE LOCAL EFFECT OF UNIVERSITY EXPENDITURES IS PROBABLY ABOUT DOUBLE THE INITIAL IMPACT

As money passes from hand to hand in a local economy, it creates new incomes. Part of it gets saved or spent elsewhere. In the case of Pittsburgh, the evidence suggests that local income-creating effects are at least double the initial injection of funds. This, of course, is to some extent a subjective matter. One can name his own multipliers -- but they would have to be between about 1.5 and 2.5 in the case of the Pittsburgh area, we believe. We feel we are conservative in picking 2.0.

B. THE MULTIPLIER EFFECT BOOSTS PITT-RELATED OUTLAYS TO $180 MILLION IN THE CITY AND COUNTY

While it is difficult to be precise on multipliers, one can identify the local components of university-related expenditures:

- $30 million of the $48 million net payroll spent by Pitt employees locally on consumer goods and services.

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[1] A "multiplier effect" refers to the results of an autonomous expenditure -- e.g. one that occurred because of the existence of the University of Pittsburgh, the spending of its employees and students, its administration, etc. The money passes from one person to another. Each successive person spends and saves part of the money he gets. Or he may spend part of it outside the local area, so that the effect is lost to the local economy. In other words, the expenditures we are studying in this report lead to many others. An example will show the arithmetic. Suppose each Pittsburgher spends 50¢ here of each dollar he earns, and 50¢ in some other place, or that he saves part of the 50¢. The local person to whom he gives money does the same -- passes on 50¢ and keeps or sends away 50¢. The effect of $1 in expenditure is: 1/1-0.5 = 1/0.5 = 2.0. So, for every dollar in local expenditures, a local income is generated of $2.00. Typical local income multipliers of this type run around 2.0 for major cities such as Pittsburgh. See Caffrey-Isaacs report, p.45.

- $20 million spent by the University itself on local procurement of goods and outside services, i.e. other than those of its own staff.

- $12 million in local expenditures each year by full-time students.

- $3.1 million as a minimum estimate of what visitors to the campus spend each year.

- $10 million to represent half the financial charges, payments to support scholars and programs, that are not included in either the University's regular payroll or its purchasing operations.

- $15 million a year to approximate the sum spent each year on construction at present. This is a minimum estimate, given a reasonable break on GSA financing through Harrisburg. It would be exceeded if the Forbes area project gets revived in line with its original scale, if not form.

These sums total $90 million of annual expenditure in Pittsburgh and the county that would not have occurred in the absence of the University or some similar major organization occupying its present locations.

If we take a recommended 70 jobs per million dollars of expenditure as a job impact, then the $90 million means 6,300 continuing new jobs in the area, in addition to the 4,700 already in existence at Pitt's Oakland campus. This is a total of 11,000.

However, if one introduces the multiplier effects of the original $90 million in expenditures -- and thinks of them as net new money coming into the market -- then they in turn create still more business in second and subsequent hands. A local multiplier of 2.0 boosts the business effects from $90 million a year to $180 million. It adds another 6,300 jobs, bringing the total up from 11,000 to 17,000. Note that these are continuing jobs and are also only at the 1970 level. The impact would continue to grow in the generation of employment as long as the University continued to expand.

Student Teachers Learn With Pupils

XV

PERSPECTIVES ON THE FUTURE

A. THE INTERACTION BETWEEN UNIVERSITY AND CITY WILL BECOME MORE COMPLEX

In conducting this research study on the economic links between town and gown, we have become increasingly conscious of the various ways in which the University is going to increase the interfaces it has with its community. Pitt's University-Urban Interface Program, which supported this study with both time and money from its sponsors, is a manifestation of changing times.

The growing study of university-urban relationships will have an important result: fewer university decisions will be made without thought for their social consequences. Politics and psychology may become more instrumental. But they will lose some of their intuitive content. Hard thinking based on empirical research will predominate.

B. A PERIODIC STUDY PROGRAM ANALOGOUS TO AN AUDIT MIGHT BE ESTABLISHED: POSSIBLE USE OF SIMULATION MODELS

Evaluation studies that require subjective approaches to conclusions offer opportunities to knowledgeable outsiders to be of service to the university. This is one of the historic roles of the auditor -- who gives a professional opinion that the client has met prescribed standards in his accounting practices and statements.

Every five years or so, major institutions might consider a stock-taking report on their social relations and academic accomplishments. The present study provides base-line data.

The need in the future is not only for better forms of organization and policy formulation but also for more flexible systems of economic analysis. The kind of impact study we are doing here should be readily adjustable to the implications of changes in enrollment, staff salaries, numbers of employees, changes in tax laws, etc. This calls for analytical models of the simulation type that will be linked to longer-term institutional planning. In short, the environment of institutional planning is calling out for attention. It is a new front for the

university president. Annual reports of universities will be increasingly addressed to wider audiences asking broader questions.

C. IN PITTSBURGH SEVERAL INSTITUTIONS MIGHT CO-OPERATE IN ANALYZING THEIR IMPACT ON THE COMMUNITY

Co-ordinated by Joseph G.K. Miller, Jr., the Pittsburgh Council on Higher Education (PCHE) has already brought together the heads of the city's universities and colleges: Carlow College, Carnegie-Mellon University, Chatham College, Duquesne University, Point Park College, and the University of Pittsburgh.

The combined economic impact of these institutions on the local community is greater than that of the University of Pittsburgh. And there are still other institutions that might be included in an extension of the analysis: Robert Morris College, Allegheny County Community College and the Pittsburgh Theological Seminary.

The total enrollments of these nine institutions of higher education last year was approximately 37,000 full-time students. This figure does not include more than 20,000 part-time scholars. In other words, the group is about 2-1/2 times the enrollment of the University of Pittsburgh (included in it).

The operating budgets for the group are slightly in excess of $200 million a year, of which Pitt's represents well over half. The high proportion is due to the University's costly graduate, health and research programs.

By extending the analysis of our report, one can readily see that in payrolls, purchases, impact on city development, and in public finance, the Pittsburgh institutions of higher education have a very important direct economic impact on the community.

One possible project, then, for PCHE, is to extend the analysis of the study to the other members of the Council, at least. In doing so, the Council might also try to get better information on cash flows than we have obtained in this initial attempt to implement the Caffrey-Isaacs models. This in turn would probably suggest changes in institutional information systems to the participating schools, with resulting improvements in the facts they have at their disposal for decision-making.

D. MORE SYSTEMATIC ANALYSIS IS NEEDED OF THE UNIVERSITY'S SPECIAL IMPACTS ON THE COMMUNITY

As pointed out early in this study, we have concentrated on some of the more obvious direct benefits and costs of the University to the community. Other studies might be conducted on the subtler impacts that such institutions have on the physical and human environment of their operations.

The special (non-cash-flow) impacts of a university are touched on in the Caffrey-Isaacs report. The list of important peripheral impacts is reproduced here from p.41 of the report:

Educational services
- Regular classes for non-students
- Extension courses
- Seminars
- Conferences
- Lectures
- Workshops
- Other related educational activities

Public events
- Athletic events
- Cultural events
- Social events

Community services
- Academic and sociological services provided by students
- Tutoring
- Recreational facilities
- Medical and health services
- Experimental primary and secondary schools

Business and professional services
- Research (e.g. Salk Institute, Learning R&D Center)
- Consultation
- Publications
- Library services
- Other facilities

The list could be extended. The University of Pittsburgh and its neighboring urban counterparts could well be studied in terms of these non-monetary (or welfare) effects. The medical and other health professions, in

particular, would merit more intensive study in view of their size and unquestioned importance to the community. A university brings to the community men and women who work for their community in many ways outside their jobs. Members of a university community have impacts beyond the narrow definitions of economics.

The techniques used in studying the broader impacts of the University would not, of course, be the same as those used in the economic study. The values involved in the University's impact could not be expressed in traditional economic terms, such as dollars and cents, or numbers of people.

One tested approach would be to select one or two cities for comparative analysis. These cities would resemble Pittsburgh but lack universities with graduate programs and large undergraduate enrollments. This technique has been used to compare growing and stagnating towns. It could be adapted for the broader type of social analysis envisaged here.

A university has still other, more subtle, influences on the community -- and here again we are talking about people. Pittsburghers may think of themselves as being different in many ways, because of the presence of the University and other schools of higher learning. The colleges and universities may be sources of ambition to some people, silent witnesses of failure to others, and to still others, symbols of undeserved cultural deprivation. The institutions may be perceived as crowding the environment, or liberating the campus area from inappropriate use or decay. These and many other modes of impact analysis are significant in the human, psychological sense. In certain respects, they are more important than economic consequences.

The challenge is to measure the more deeply hidden aspects of the university-urban interfaces. A sound start has been made in the University-Urban Interface Program at the University of Pittsburgh. The program would benefit from a more sophisticated conceptual scheme to support more refined research objectives. The development of such a "way of thinking" about the university and the community appears to us to be a necessary first step to increasing the depth of university impact studies. Such a plan would bring discipline to the research and increase the productivity of efforts to carry it out.

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APPENDIX

METHODOLOGICAL NOTE

In testing the Caffrey-Isaacs formulae in this study, we found that some elements stand up well while others need modification. This was a prototype application to a major urban university, designed in part to suggest methodological improvements.

A separate document on methodology has been prepared, which treats:

- Acquisition of data
- Selection of data processing tools
- Organization of data for report writing
- Comments on the Caffrey-Isaacs models

Comments on the Caffrey-Isaacs models cover these points:

- Additional economic impact dimensions
- Importance of revenues vs. expenditures
- Branch campuses and interstate implications
- Definition of "local business volume"
- Comparative evaluation of tax exemptions
- Treatment of university "businesses"
- Consideration of models on value of business property and inventories
- Problems on educational cost allocation of children of institution's employees
- Refinement of multipliers for banking system
- Conceptual problem on housing costs
- More attention to expenditures of visitors
- The problem of indicators of qualitative impact

***

For copies of this technical appendix to the report, write to:

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